Scout Report sent out	☐
Noted in the NID File	☐
Location map pinned	☐
Approval or Disapproval Letter	☒ Prior OGCC
Date Completed, P. & A. or operations suspended	completed POW
Pin changed on location map	☐
Affidavit and Record of A & P	☐
Water Shut-Off Test	☐
Gas-Oil Ratio Test	☐
Well Log Filed	☐

FILE NOTATIONS

Entered in N I D File: Prior OGCC
Entered On S R Sheet:
Location Map Pinned:
Card Indexed:
I W R for State or Fee Land:

Checked by Chief:
Copy N I D to Field Office:
Approval Letter:
Disapproval Letter:

COMPLETION DATA: completed 3-2-55
Date Well Completed: 10-4-58
Location Inspected:
Bond released
State or Fee Land:

OW ✓ WW: TA:
GW: OS: PA:

LOGS FILED

Driller's Log 6-26-61
Electric Logs (No.) 4

E ✓ I: E-I: GR: GR-N ✓ Micro ✓
Lat ✓ Mi-L: Sonic: Others:

FD 4A MASTER SET [illegible]

SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING January 9, 1955

WELL NO. 1

North Boundary Butte
(FIELD)

San Juan, Utah
(COUNTY)

33
(SECTION OR LEASE)

T. 42 S., R. 22 E., SLB&M
(TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
			Location: 3300' N., 1980' W., of SE Corner, Sec. 33, T. 42 S., R. 22 E., Salt Lake Base and Meridian, San Juan County, Utah
			Elevations: Mat 5016.3', K. B. 5027.9', D. F. 5025.9'.
1-9	0	261	Drilled 261', spudded in at 9:00 AM with 12 1/4" bit. Repaired mud line and ran slope tests, 1 1/2 hours. Treated mud with gel.
			Mud Summary Weight 9.0#/gal. Viscosity 40 sec.
			George Noland Drilling Company T. T. Glazebrook H. E. Clements J. M. Conder

CONDITION AT BEGINNING OF PERIOD				
HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
DRILL PIPE SIZES			4 1/2", 13.0#	

Leonard M. Snyder
SIGNED

PD 4A MASTER SET [illegible] PRINTED IN U.S.A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING [illegible]

North [illegible] Dome
(FIELD)

San [illegible]
(COUNTY)

WELL NO. 1

Section 33
(SECTION OR LEASE)

T. 42 S., R. 22E. S. L. M.
(TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
[illegible]	701	711	[illegible]. [illegible] conductor pipe, 1/2 hr. [illegible]
1-22	711	927	[illegible]. [illegible], [illegible] hrs. [illegible] mud with gel and [illegible].
[illegible]	927	1023	Drilled 96'. [illegible] 4 hrs. Circulated [illegible] hrs. [illegible]
1-23	1023	1025	Drilled 2'. Ran [illegible], 36#, [illegible] casing. Landed at 1012'. Used [illegible] cement, 115# slurry. Halliburton cemented. Pumped [illegible] bbls. of water ahead and 10 bbls. behind. Good returns at surface. Plug on bottom at 5:45 [illegible]. Broke out landing joint, [illegible], picked up both BOP's and cemented bottom of cellar, [illegible]. Started drilling mouse hole, 8 hrs.
1-24	1025	1025	Drilled 0'. Finished drilling mouse hole and cleaned pits, 8 hrs. Rigged up Hydril [illegible] BOP's, 8 hrs. [illegible] water pumps on #1 and #2 motors, repaired [illegible] BOP, 8 hrs.
1-25	1025	1352	Drilled 327'. [illegible] (W. O. C. [illegible]) Ran in hole and found top of cement at 100[illegible]' [illegible] pipe. [illegible] blowout equipment with 750# for 15 minutes, O.K. [illegible] casing shoe. Maximum pressure test, [illegible] for [illegible], O.K. [illegible] mud with gel, quebracho, and caustic.
1-26	1352	1738	Drilled 386'. Picked up core barrel. [illegible]. Treated mud with quebracho and caustic.

[illegible] and kelly [illegible] checked daily.

Mud Summary [illegible]/55
Weight [illegible]
Viscosity [illegible]
Water loss 9.6 cc.
Filter cake [illegible]
[illegible] 250 [illegible]
[illegible]

[illegible] Drilling Company
[illegible] [illegible]brock
[illegible]
[illegible] [illegible]nder

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	701'		

DRILL PIPE SIZES 4 1/2" 16.6#

Leonard Snyder
SIGNED

PD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING January 23, 19[illegible]

North Boundary Butte (FIELD)

San Juan, Utah (COUNTY)

WELL NO. 1

Section 33 (SECTION OR LEASE)

T. 42S., R. 22E., S. L. M. (TOWNSHIP OR RANGE)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
1-17	1738	2146	Drilled 408'. Number [illegible] engine down; broken piston, sleeve, portion of block and twisted connecting rod. Treated mud with quebracho, caustic, and gel.
1-18	2146	2350	Drilled 204'. Circulated [illegible] samples, [illegible] hour. Treated mud with gel, quebracho and caustic.
1-19	2350	2482	Drilled 132'. Changed to gypsum base mud, 6 1/4 hours. Mixed starch and gypsum.
1-20	2482	2688	Drilled 206'. Treated mud with gypsum and starch.
1-21	2688	2892	Drilled 204'. Jetted shale [illegible] and mixed mud, 1 1/4 hours. Treated mud with gypsum and preservative. Mixed salt gel, starch, gypsum and preservative.
1-22	2892	3016	Drilled 124'. 1 hour repaired [illegible] line. 1 1/2 repaired cathead. Strapped pipe out of hole. Treated mud with gypsum and preservative.
1-23	3016	3113	Drilled 97'. Strapped out, 20' too long according to pipe tally. Treated mud with gypsum, starch, salt gel, and preservative.
			B.O.P. checked daily.
			Drillers for George [illegible]: T. T. [illegible]; H. E. Clements; J. M. [illegible]
			Mud Summary: Weight: 9.[illegible]-10.1#/gal. Viscosity: 40-45 sec. Water Loss [illegible]-9.5 cc Salinity: 200-350 ppm NaCl Filter Cake: 1/32-2/32" pH: [illegible]-8.5

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023	9 5/8"	1012'
7 7/8"	1023	1738		

DRILL PIPE SIZES: 4 1/2", 16.6#

Leonard Snyder, & D. K. Murray

FD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING January 30, 1955

WELL NO. 1

North Boundary Butte (FIELD)

San Juan, Utah (COUNTY)

Section 33 (SECTION OR LEASE)

T. 42 S., R. 22 E., SLM (TOWNSHIP OR RANGE)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
1-24	3113	3262	Drilled 149'. Treated mud with preservative, gypsum, salt gel, and starch.
1-25	3262	3375	Drilled 113'. 1/2 hr. jetted shale pits. Treated mud with gypsum, preservative, starch, and salt gel.
1-26	3375	3464	Drilled 89'. 3 1/2 hrs. installed #2 motor, 1 hr. repaired stand pipe. Treated mud with preservative and gypsum.
1-27	3464	3561	Drilled 97'. 1/2 hr. circulated up ditch cuttings, 4 hrs. repaired stand pipe. Treated mud with starch, salt gel, gypsum, and preservative.
1-28	3561	3662	Drilled 101'. Circulated 1 hr. Rigged up to run Schlumberger logs, 1 hr. Ran Schlumberger electrical survey and Microlog to 3573', 6 hrs. Treated mud with gypsum, salt gel, starch and preservative.
1-29	3662	3762	Drilled 100'. Lost circulation ±50 bbl. at 3762'. Added lost circulation material, 3 hrs. Pulled 5 stands and got good returns. Hit bridge 20' off bottom. Treated mud with gypsum, preservative, starch and 51 bags fiber seal.
1-30	3762	3857	Drilled 95'. Lost circulation, ±70 bbls., for second time at 3762'. Pulled 2 stands and mixed lost circulation material, 3 hrs. Reamed 25' to bottom, 2 1/2 hrs. Cut off drilling line, 1 1/4 hrs. Treated mud with 21 bags Fuf Plug, 14 sacks fiber seal, 2 sacks hulls, starch, gypsum, preservative and salt gel.

Checked B. O. E. and Kelly Stop daily.

Mud Summary

Weight	9.6 - 10.1#/gal.
Viscosity	42 - 43 secs.
Water Loss	8.4 - 9.5 c.c.
Cake	2/32 in
pH	7.0
Salinity	200 - 350 ppm. NaCl

Drillers for Geo. Noland Drilling Company
F. B. Levis
H. E. Clements
T. T. Glazebrook

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023'	9 5/8"	1012'
7 7/8"	1023'	3113'		

DRILL PIPE SIZES 4 1/2", 16.6 #/lin. ft.

Dist. Mgrs. J. L. Snyder

PD 4A [illegible] PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING

[illegible] (FIELD)

San Juan, Utah (COUNTY)

[illegible] (DATE)

WELL NO. 1

33 (SECTION OR LEASE)

T. 42 S., R. 22E., S.L.M. (TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
[illegible]	3857	3964	Drilled 107'. [illegible] B.O.P., 3 1/2 [illegible] 1 hour. Repair- [illegible] Treated mud with gypsum [illegible]
[illegible]	3964	4063	Drilled [illegible] cylinder, and worked on master [illegible] bbls, at 4062'. Mixed [illegible] Treated mud with [illegible] sacks fiber [illegible] preservative, gel and starch.
[illegible]	4063	4112	Drilled [illegible] Conditioned for DST #1, 1 hour [illegible] hours. Started DST #1, [illegible] preservative and starch.
[illegible]	[illegible]	4176	Drilled [illegible] Ran tester with two [illegible] outside pressure recorders, [illegible] 4111'-4112', 30' air [illegible] Tool open [illegible] 30 minutes, [illegible] bypassed [illegible] 11 minutes, dead remainder of [illegible] Recovered 92' (0.40 bbls) [illegible] Salinity (?) ppm / Weight #/gal. [illegible] 9.4, 9.3, 9.5 [illegible] lized. Mud before [illegible] Broke down and loaded [illegible] retrieve [illegible] Started pulling [illegible] preservative, and [illegible]
[illegible]	[illegible]	4236	[illegible] Worked on motors, 1/2 hour. [illegible]
[illegible]	[illegible]	4372	Drilled [illegible] hours. Worked on motor [illegible] light plant, 1 1/2 [illegible] hour. Treated [illegible]

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	FROM	TO	CASING SIZE	DEPTH SET
[illegible]	0	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	3857		

DRILL PIPE SIZES [illegible] 1/2", [illegible]

[illegible] M. [illegible]

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SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING

[illegible] 6, 1958

North Boundary Butte
(FIELD)

San Juan, Utah
(COUNTY)

WELL NO. [illegible]

33
(SECTION OR LEASE)

T.42S., R.22S., S.L.M.
(TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/6	4374	4440	Drilled 66'. Lost circulation at [illegible], 150 bbls. Pulled 5 stands, mixed a pit of mud and [illegible] full returns. Went back in hole, made 2' and lost circulation at [illegible]. [illegible] time 8 1/2 hours. Started pulling for new bit, 1 1/2 hours. Treated mud with 10 sacks hulls, 18 sacks fibre seal, 5 sacks [illegible], [illegible] seal, salt gel, [illegible], and preservative.

Mud Summary
Weight: 9.[illegible]
Viscosity: [illegible]
Water Loss: [illegible]
Cake: 2/32"
Sal nity: [illegible]
pH: [illegible]

Drillers for [illegible] Drilling [illegible]
[illegible] Lewis
H. [illegible] Clements
T. [illegible]

[illegible]

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1020'	9 5/8"	[illegible]
7 7/8"	1020'	3857'		

DRILL PIPE SIZES [illegible], [illegible] #

[illegible] Snyder

PD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING [illegible], 195[illegible]

[illegible] (FIELD)

San Juan, Utah (COUNTY)

WELL NO. 1

Section 33 (SECTION OR LEASE)

T. 41 S., R. [illegible] E., S. L. M. (TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
[illegible]	4440	4538	Drilled 98'. [illegible] hole and [illegible] with new bit, [illegible] (due to [illegible] during [illegible]). Circulated up samples, 1 1/2 [illegible]. Treated [illegible] starch, salt gel and gypsum.
[illegible]	4538	4594	Drilled [illegible] stem test, [illegible] Pulled [illegible] up test tool, 2 hours. [illegible] DST [illegible], 4387-4418, Johnston testers. [illegible] tester [illegible] dual Bobtail packers at [illegible] subsurface bean, perf[illegible] and 4530' [illegible], no water cushion. Tool open 1 hour [illegible] minutes, [illegible] 30 minutes. Very weak blow, dead after 5 minutes. [illegible] twice with no success [illegible] reviving blow. Fluid loss [illegible]. Recovered 350' ([illegible]) unaltered mud.

Feet Above Tester	Description	Salinity (t) NaCl	Wt. #/gal.
[illegible]	Drilling [illegible]	[illegible]	9.4
	Drilling Mud	[illegible]12	9.4
Tool	Drilling Mud		-

IFP [illegible]/[illegible], FFP [illegible]/[illegible], SIP [illegible]30/[illegible], HP [illegible]/[illegible]

Mud before test 9.4#/gal., [illegible]

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
			Pulled test [illegible] to [illegible], 1 1/2 hours. Ran in hole with [illegible] hours.
[illegible]	4594	4626	Drilled 9', Cored 23'. Circulated prior to coring, 1 hour. Pulled out of hole for [illegible], 2 hours. Picked up and checked core barrel and [illegible], 1 hour. [illegible] for Core #1, at 4603', 2 hours. Circulated, 1 hour. Cored [illegible] hours. Hycalog released and Rotary Engineering installed [illegible]. Treated mud with gypsum, preservative and starch.
2/10	4626	4640	Cored 13', Drilled 1'. Cored, [illegible] hours. Pulled Core #1, 4603'-4638', recovered 35', serviced core barrel, 1/2 hour. Ran back in hole for Core #2, 1 1/2 hours. Cored 1' [illegible] hours. Pulled Core #2, 4638'-4639', recovered 1.2'. Dressed core barrel, 1 1/2 hour. Ran back in hole with rock bit, 1 1/2 hours. Drilled 1', 1 hour. Pulled out to take Core #3, 2 1/2 hours. Treated mud with gypsum, preservative, salt gel, and mylogel starch.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0'	1023'	9 5/8"	1012'
[illegible]	1023'	4440'		

DRILL PIPE SIZES 4 1/2" [illegible]

Leonard M. Snyder

PD 4A MASTER SET 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

WELL NO. 1

North Boundary Butte
(FIELD)
San Juan, Utah
(COUNTY)

DRILLING REPORT
FOR PERIOD ENDING
January 16, 1955

Section 33
(SECTION OR LEASE)
T. 42 S., R. 22E. S. L. M.
(TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
1-10	261	724	Drilled 463'. Welded suction line on pump and conductor pipe, 1/2 hr. Treated mud with gel.
1-11	724	927	Drilled 213'. Repaired rod line, 1 1/2 hrs. Treated mud with gel and quebracho.
1-12	927	1023	Drilled 96'. Repaired compound chain and pump chain, 4 hrs. Circulated 2 hrs. Pulled out of hole to run surface casing.
1-13	1023	1023	Drilled 0'. Ran 9 5/8", 36#, J-55, L.T.& C., Spang casing. Landed at 1012'. Used approximately 350 sacks of Ideal Portland cement, 115# slurry. Halliburton cementers. Pumped 20 bbls. of water ahead and 10 bbls. behind. Good returns at surface. Plug on bottom at 5:45 AM. Broke out landing joint, put on Bonnet head, picked up both BOP's and cemented bottom of cellar, 8 hrs. Started drilling mouse hole, 8 hrs.
1-14	1023	1023	Drilled 0'. Finished drilling mouse hole and cleaned pits, 8 hrs. Rigged up Hydril and BOP's, 8 hrs. Packed water pumps on #1 and #2 motors, repaired heater on #1 motor and changed rams in BOP, 8 hrs.
1-15	1023	1355	Drilled 332'. Put on new compound chain (W. O. C.). Ran in hole and found top of cement at 1004' in surface pipe. Tested blowout equipment with 750# for 15 minutes, O.K. Drilled out 5' below casing shoe. Maximum pressure test, 500# for 5 minutes, O.K. Treated mud with gel, quebracho, and caustic.
1-16	1355	1738	Drilled 383'. Picked up core barrel, 2 hrs. Treated mud with quebracho and caustic.

B.O.E. and kelly stop checked daily.

Mud Summary 1/9/55-1/16/55
Weight 9.8-10.8#/gal.
Viscosity 40-58 sec.
Water Loss 9.6 cc.
Filter Cake 2/32 in.
Salinity 200 ppm
pH 10

George Roland Drilling Company
T. T. Grzebrook
H. E. Clements
J. E. Cinder

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	261'		

DRILL PIPE SIZES 4 1/2", 16.6#

Leonard Snyder
SIGNED

PD 44 · 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING January 23, 1955

North Boundary Butte (FIELD) San Juan (COUNTY), Utah

WELL NO. Section 33

T.42S., R.22E., S.L.M.

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
1-17	1738	2146	Drilled 408'. Number 2 engine down; broken piston, sleeve, portion of block and twisted connecting rod. Treated mud with quebracho, caustic, and gel.
1-18	2146	2350	Drilled 204'. Circulated up samples, 1 hour. Treated mud with gel, quebracho and caustic.
1-19	2350	2482	Drilled 132'. Changed to gypsum base mud, 6 1/4 hours. Mixed starch and gypsum.
1-20	2482	2688	Drilled 206'. Treated mud with gypsum and starch.
1-21	2680	2892	Drilled 204'. Jetted shale pit and mixed mud, 1 1/4 hours. Treated mud with gypsum and preservative. Mixed salt gel, starch, gypsum and preservative.
1-22	2892	3016	Drilled 124'. 1 hour repaired mud line, 1 1/2 repaired cathead. Strapped pipe out of hole. Treated mud with gypsum and preservative.
1-23	3016	3113	Drilled 97'. Strapped out, 26' too long according to pipe tally. Treated mud with gypsum, starch, salt gel, and preservative.
			B.O.E. checked daily.
			Drillers for George Noland: T. T. Glazebrook H. E. Clements J. M. Conder
			Mud Summary: Weight: 9.3-10.1#/gal. Viscosity: 40-45 sec. Water Loss 7.8-9.5 cc Salinity: 200-350 ppm NaCl Filter Cake: 1/32-2/32" pH: 6.0-8.5

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023	9 5/8"	1012'
7 7/8"	1023	1738		
DRILL PIPE SIZES			4 1/2", 16.6#	

Leonard Snyder, & D. F. Murray

PD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING January 30, 1955

North Boundary Butte (FIELD)
San Juan, Utah (COUNTY)

WELL NO. 1
Section 33 (SECTION OR LEASE)
T. 42 S., R. 22 E., SLM (TOWNSHIP OR RANGE)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
1-24	3113'	3262	Drilled 149'. Treated mud with preservative, gypsum, salt gel, and starch.
1-25	3262	3375	Drilled 113'. 1/2 hr. jetted shale pits. Treated mud with gypsum, preservative, starch, and salt gel.
1-26	3375	3464	Drilled 89'. 3 1/2 hrs. installed #2 motor, 1 hr. repaired stand pipe. Treated mud with preservative and gypsum.
1-27	3464	3561	Drilled 97'. 1/2 hr. circulated up ditch cuttings, 4 hrs. repaired stand pipe. Treated mud with starch, salt gel, gypsum, and preservative.
1-28	3561	3662	Drilled 101'. Circulated 1 hr. Rigged up to run Schlumberger logs, 1 hr. Ran Schlumberger electrical survey and Microlog to 3573', 6 hrs. Treated mud with gypsum, salt gel, starch and preservative.
1-29	3662	3762	Drilled 100'. Lost circulation ±50 bbl. at 3762'. Added lost circulation material, 3 hrs. Pulled 5 stands and got good returns, hit bridge 20' off bottom. Treated mud with gypsum, preservative, starch and 31 bags fiber seal.
1-30	3762	3857	Drilled 95'. Lost circulation, ±30 bbls., for second time at 3762'. Pulled 4 stands and mixed lost circulation material, 3 hrs. Reamed 25' to bottom, 2 1/2 hrs. Cut off drilling line, 1 1/4 hrs. Treated mud with 21 bags Tuf Plug, 14 sacks fiber seal, 2 sacks hulls, starch, gypsum, preservative and salt gel.

Checked B. O. E. and Kelly Stop daily.

Mud Summary

Weight	9.6 - 10.1#/gal.
Viscosity	42 - 43 secs.
Water Loss	8.4 - 9.5 c.c.
Cake	2/32 in
pH	7.0
Salinity	200 - 350 ppm. NaCl

Drillers for Geo. Noland Drilling Company
F. B. Lewis
H. E. Clements
T. T. Glazebrook

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023'	9 5/8"	1012'
7 7/8"	1023	3113'		

DRILL PIPE SIZES 4 1/2", 16.6 #/lin.ft.

D. K. Murray & L. Snyder

PD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING February 6, 1955

North Boundary Butte
(FIELD)

San Juan, Utah
(COUNTY)

WELL NO. 1

33
(SECTION OR LEASE)

T. 42 S., R. 22E., S.L.M.
(TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
1/31	3857	3964	Drilled 107'. Pulled out of hole and placed choke valve in B.O.P., 3 1/2 hours. Ran back in hole, 1 1/2 hours, reamed to bottom, 1 hour. Repaired compound chain and moved motor, 1 1/2 hours. Treated mud with gypsum, preservative, and salt gel.
2/1	3964	4063	Drilled 99'. Put on [illegible] clutch and brake cylinder, and worked on master clutch valve, 1 1/2 [illegible]. Lost circulation, 20[illegible] bbls, at 4062'. Mixed lost circulation material, [illegible] hours. Treated mud with 30 sacks fiber seal, 13.5 sacks hulls, [illegible], preservative, salt gel and starch.
2/2	4063	4129	Drilled 66'. Worked on [illegible], 1 1/2 hours. Circulated for DST #1, 1 hour. Strapped out of hole, 2 hours. Made up test tool, 2 hours. Started DST #1, 3943'-4129', at 9:0[illegible] PM. Treated mud with gypsum, preservative and starch.
2/3	4129	4176	Drilled 47'. DST #1, 3943'-4129', Johnston Testers. Ran tester with two 6 1/2" bobtail packers at 3935' and 3943', 3 outside pressure recorders, 1" subsurface bean, perforations 3943'-3964' and 4114'-4129', 30' air cushion. Initial shut in [illegible] minutes, tool open 2 hours, 30 minutes, final shut in [illegible] minutes. Weak blow, dead after 6 minutes; bypassed packer second time, weak [illegible], dead after 15 minutes, dead remainder of test. Fluid loss in annulus [illegible] feet (0.[illegible] bbls). Recovered 93' (0.46 bbls) mud.

Feet Above Tester	Description	Salinity (±) ppm	Weight #/gal.
[illegible]	Mud Filtrate	[illegible]7 ppm	8.4
[illegible]	Mud	742 ppm	9.3
Tool	Mud	792 ppm	9.5

ISIP 22[illegible], HP 2025, IFP [illegible], FFP 12[illegible], SIP 120 stabilized. Mud before test [illegible]00 ppm, 9.6#/gal.

Testing, 2 hours. Pulled tester, 1 1/2 hours. Broke down and loaded tool, 2 hours. [illegible] thawing rat hole to retrieve kelly, [illegible] 1/2 hours. [illegible] chain, 2 hours. Started pulling [illegible]. Treated mud with gypsum, preservative, and starch.

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/4	4176	4285	Drilled [illegible]'. [illegible], 2 hours. Worked on motors, 1/2 hour. Treated mud with gypsum, preservative and starch.
2/5	4285	4374	Drilled 89'. Pulled out of hole for new bit, 2 hours. Worked on motor [illegible] hours. Hooked up light plant, 1 1/2 hours. Ran back in hole, 1 1/2 hours. Treated mud with salt gel.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023'	9 5/8"	1012'
[illegible]7/8"	1023	3857		

DRILL PIPE SIZES 4 1/2", 16.[illegible]#

Leonard M. Snyder

PD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING February 6, 1955

North Boundary Butte (FIELD)
San Juan, Utah (COUNTY)

WELL NO. 33
(SECTION OR LEASE) T.42S., R.22E., S.L.B.M.
(TOWNSHIP OR SURVEY)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/6	4374	4440	Drilled 66'. Lost circulation at 4381', 150 bbls. Pulled 5 stands, mixed a bit of mud and got full returns. Went back in hole, made 2' and lost circulation at 4386'; total time 8 1/2 hours. Started pulling for new bit, 1 1/2 hours. Treated mud with 10 sacks hulls, 18 sacks fibre seal, 5 sacks tuff plug, clay gel, salt gel, gypsum, and preservative.

Mud Summary
Weight: 9.4-9.9#/gal.
Viscosity: 44-52 secs.
Water Loss: 5.2-9.0 cc.
Cake: 2/32"
Salinity: 300-350 ppm
pH: 7.0.

Drillers for Geo. Noland Drilling Co.
E. L. Lewis
H. E. Clements
T. T. Glazebrook

B.O.P. Checked Daily

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023'	9 5/8"	1012'
7 7/8"	1023'	3857'		
DRILL PIPE SIZES	4 1/2",	16.6#		

Leonard M. Snyder

PD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING February 13, 1953

North Boundary Butte (FIELD)
San Juan, Utah (COUNTY)

WELL NO. 1
Section 33 (SECTION OR LEASE)
T.41 S., R.22E., S.L.M. (TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/7	4440	4538	Drilled 98'. Pipe shed coming out of hole and ran back with new bit, 7 1/2 hours. (Had to thaw water lines during operation). Circulated up samples, 1 1/2 hour. Treated mud with starch, salt gel and gypsum.
2/8	4538	4594	Drilled 56'. Worked on pump, 1/2 hour. Circulated for drill stem test, 2 hours. Pulled out of hole, 2 hours. Unloaded and made up test tool, 2 hours. Ran in hole with tool, 1 1/2 hours. DST #2, 4367-4548, Johnston testers. Ran tester with dual Bobtail packers at 4362 and 4367, three outside pressure recorders, 1" subsurface bean, perforations 4387'-4409' and 4530'-4548', no water cushion. Tool open 1 hour 13 minutes, shut in 30 minutes. Very weak blow, dead after 5 minutes. By-passed packer twice with no success in reviving blow. Fluid loss in annulus 6' (.44 bbls.). Recovered 150' (.79 bbls.) unaltered mud.

Feet Above Tester	Description	Salinity (t) NaCl	Wt. #/gal.
90	Drilling Mud	330	9.4
0	Drilling Mud	412	9.4
Tool	Drilling Mud	-	-

IFP 120/150, FFP 120/150, SIP 130/195, HP 2220/2220.
Mud before test 9.4#/gal., 330 ppm.

Pulled tool, 2 hours. Broke down and loaded tool, 1 1/2 hours. Ran in hole with new bit, 1 1/2 hours.

2/9	4594	4626	Drilled 9', Cored 23'. Circulated prior to coring, 1 hour. Pulled out of hole for core barrel, 2 hours. Picked up and checked core barrel and jars, 1 hour. Ran back in hole for Core #1, at 4603', 2 hours. Circulated, 1 hour. Cored 15 hours. Hycalog released and Rotary Engineering installed at 12:00 mid. Treated mud with gypsum, preservative and starch.
2/10	4626	4640	Cored 13', Drilled 1'. Cored, 8 hours. Pulled Core #1, 4603'-4638', recovered 35', serviced core barrel, 1/2 hour. Ran back in hole for Core #2, 1 1/2 hour. Cored 1' 4 hours. Pulled Core #2, 4636'-4639', recovered 1/2'. Dressed core barrel, 1 1/2 hour. Ran back in hole with rock bit, 1 1/2 hours. Drilled 1', 1 hour. Pulled out to take Core #3, 2 1/2 hours. Treated mud with gypsum, preservative, salt gel, and mylogel starch.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0'	1023'	9 5/8"	1012'
7 7/8"	1023'	4440'		
DRILL PIPE SIZES	4 1/2",	16.6#		

Leonard M. Snyder

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SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING February 12, 1955

WELL NO. 1

North Boundary Butte (FIELD)

San Juan, Utah (COUNTY)

Section 33 (SECTION OR LEASE)

T. 42 S., R. 22E., S. L. M. (TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/11	4640	4653	Cored 13'. Ran in hole with magnetic basket, 2 hours. Washed to bottom with basket, 1 hour. Came out with basket, 2 hours. Washed to bottom, ½ hour. Reamed 7 1/8 x 14 mm, 4 hours. Cored, 1 hour. Pulled Core #3. Hold-Hole', cored 0', recovered 4'. Serviced core barrel, 1 hour. Ran back in hole with core barrel for Core #4, 1 1/2 hours. Washed to bottom, 1/2 hour. Cored, 5 hours. Treat mud with gypsum, preservative and starch.
2/12	4653	4671	Cored 18'. Cored 6 hours. Pulled Core #4, 4646-4660', cored 14', recovered 14'. Dumped core, 1 hour. Serviced core barrel, 1/2 hour. Moved drilling line, 1 1/2 hours. Ran in hole for Core #5, 2 hours. Washed to bottom, 1/2 hour. Cored 9 1/2 hours. Started pulling Core #5 at 4671', 1 hour. Treated mud with salt gel, starch, gypsum and preservative.
2/13	4671	4710	Cored 12'. Drilled 27'. Finished pulling Core #5, 4660'-4671', cored 11', recovered 11'. Serviced core barrel and set aside, 1 hour. Ran into hole with bit and reamed to bottom, 2 1/2 hours. Circulated 1 1/4 hours. Came out of hole 1 1/2 hours. Picked up core barrel and ran back into hole for Core #6, 2 hours. Washed to bottom, 1/2 hour. Cored 7 hours. B. O. P. checked daily. Drillers for Geo. Noland Drilling Co. R. R. Lewis H. E. Clement T. F. Glazebrook Mud Summary Weight: 9.4-9.7#/gal. Viscosity: 40-59 sec. Water Loss: 7.4-14 cc. Filter Cake: 1/32"-2/32" Salinity: 350-600 ppm NaCl pH 7

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023'	9 5/8"	1012'
7 7/8"	1023	4440'		

DRILL PIPE SIZES 4 1/2", [illegible]

Leonard Snyder and R. Wyman

PD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING February 20, 1955

North Boundary Butte (FIELD)

San Juan, Utah (COUNTY)

WELL NO. 1

Section 33 (SECTION OR LEASE)

42 S./22 E., SLM (TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	TO	REMARKS
2/14	4710	4784	DRILLED 60', CORED 14'. 1¼ hours circulated samples and conditioned hole. ½ hour set back core barrel. ½ hour repaired oiler chain. CORE # 6, 4698-4724, recovered 26'. Treated mud with preservative, starch, and salt gel.
2/15	4784		DRILLED 0'. 1½ hours unloaded and made up test tool. 4 hours ran DST 3. ½ hour unseated packer. 8 hours waited for pressure to release on Johnston head, which was plugged. Backed off top single - oil, gas and mud then blew to the crown. No damage was inflicted, as the top single and Johnston head were chained to the derrick. 2 hours cleaned up rig. 2 hours broke down test tools and loaded out same. Pulled 630' of oil filled drill stem, ½ hour rest for crew as oil was heavily cut with hydrogen sulfide gas.

DST # 3, 4662' - 4784', Johnston Testers, 2-6⅝" bobtail packers, 4657' and 4662'. 3 outside pressure recorders, 3/4" subsurface bean, 1" surface bean, perforations 4662-4678' and 4766-4784' (90' air cushion. 20 minute initial shut-in, open 2 hours 30 minutes, shut-in 30 minutes. Blow strong immediately, increasing to very strong, died very suddenly after 17 minutes. Weak 5 minute puff after 1 hour, dead remainder of test, plugged at tester head. Gas rate 1160 MCF/D through 1" choke, pressure 40 psi, rate increasing until Johnston head plugged. Backed off 1 single below head. Tester then blew oil and gas for 17 minutes. Inflammable sweet gas to surface in 4 minutes. Recovered 630' (6.7 barrels) gassy sulfurous oil, 40° API gravity, brownish green to brown black, with strong H_2S odor, cut 0.8 34% black sulfur water.

Feet Above Tester	Description	Cut %
630	brownish green oil	0.8 black sulfur water
540	brownish green oil	0.5 black sulfur water
450	brownish black oil	15 black sulfur water
180	brownish black oil	34 BS & W (mostly black sulfide)

Note: black sulfur water cut prevents salinity determination.

Mud before test 600 ppm (st), 9.7# per gal. IFP 1215 FFP 1230, SIP 1650 (nearly stabilized after 20 Minutes) HP 2325.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	FROM	TO	CASING SIZE	DEPTH SET
12¼"	0	1023	9 5/8"	1012
7 7/8"	1023	4710		

DRILL PIPE SIZES 4½" 16.6#/ft.

D. K. Murray

DITCH SAMPLES

Examined by Wright 0 to 180
Sander ___ to ___

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LAGGED (NOT)
20	110	100	Sandstone, white, well-sorted, subangular, some frosted quartz grains, friable, no clay cemented, slightly calcareous.
110	140	100	Sandstone, white, well-sorted, subangular, friable to well-cemented, some yellow matrix, some brown staining or flecks, slightly calcareous.
140	150	80	Sandstone, as above.
		20	Sandstone, red, silty and argillaceous matrix, well-sorted, clear subangular grains, slightly calcareous.
150	160	90	Sandstone, as above.
		10	Siltstone, red, sandy with subangular, clear, well-sorted grains, few purple shale fragments.
160	180	60	Sandstone, as above.
		30	Siltstone, as above.
		10	Shale, reddish purple to purple, friable, well-bedded.

DITCH SAMPLES

Examined by Wright 180 to 750
Snyder ___ to ___

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED (not)
180	190	100	Sandstone, red, fine to very fine, subangular to subrounded, well-sorted, slightly calcareous; some mica. Top Wingate +180'	
190	200	100	Sandstone, as above, some coarse quartz crystals, frosted to clear, subangular to subrounded.	
200	220	50	Sandstone, red, as above.	
		50	Sandstone, white to yellow, medium to fine, subangular to subrounded, well-sorted, slightly calcareous.	
220	230	100	Sandstone, orange to red, fine to very fine, subangular to subrounded, well-sorted; some white sandstone, slightly calcareous to calcareous.	
230	240	100	Sandstone, as above, with few limestone fragments, gray, IVFA, and some coarse quartz grains frosted to clear.	
240	250	100	Sandstone, as above, no limestone.	
250	260	50	Sandstone, orange, as above.	
		50	Sandstone, red, diminishing in quantity.	
260	280	100	Sandstone, orange, as above, mostly unconsolidated, fine to very fine.	
280	340	100	Sandstone, orange to light orange, some white, subangular to subrounded, well-sorted, slightly calcareous, friable to unconsolidated; some evaporites?	
340	350	100	Sandstone, as above with rare calcite.	
350	360	100	Sandstone, as above; some microconglomerate of coarse to medium amber quartz grains.	
360	370	100	Sandstone, as above, rare calcareous sandstone.	
370	490	100	Sandstone, as above, some rounded, amber quartz grains.	
490	680	100	Sandstone, orange to red, fine to very fine, well-sorted, subrounded to subangular, slightly calcareous; free quartz, coarse, frosted to clear.	
680	720	100	Sandstone, as above; few red siltstone fragments.	
720	730	80	Siltstone, red, sandy, fine grained well-sorted, subrounded.	
		20	Sandstone, as above.	
730	750	90	Sandstone, red to orange fine to very fine, subangular to subrounded, well sorted, some white mottling.	

DITCH SAMPLES

Examined by Wright 750 to 940
Snyder to

Well 1
Field or Area North [redacted]

FROM	TO	%	SHOWS UNDERLINED SAMPLES LAGGED (not)
750	770	100	Sandstone, as above, with some brown sandstone; mottling increases to 10%.
770	780	100	Sandstone, red to orange, very fine, subrounded, some siltstone, mottled as above.
780	810	95	Sandstone, red to orange, very fine to silty, subrounded, well-sorted, with occasional white mottling.
		5	Siltstone, red, slightly calcareous.
810	820	50	Sandstone, as above.
		50	Siltstone, reddish brown, sandy, very fine-grained.
820	830	50	Limestone or calcite, with red shale veins and some quartz pebble inclusions in calcite, probably secondary mineralization (fault?)
		30	Sandstone, as above.
		20	Siltstone, as above.
830	840	50	Sandstone, reddish orange, very fine to silty, subrounded, well-sorted.
		30	Sandstone, light green, very fine, subrounded, calcareous, with red siltstone or shale veinlets.
		20	Sandstone, light green, very fine, subrounded, well-sorted, calcareous.
840	850	60	Siltstone, reddish brown, sandy, calcareous, green mottling.
		40	Sandstone, red orange, as above.
850	860	80	Siltstone, as above, some brown.
		20	Sandstone, red orange, very fine to silty.
860	870	80	Siltstone, brown with green mottling, calcareous to slightly calcareous.
		20	Siltstone, light red with green mottling, calcareous.
870	880	90	Siltstone, brown, as above.
		10	Siltstone, light red, with mottling as above, some calcite.
880	890	100	Siltstone, red to brown, with green mottling, calcareous.
890	900	100	Siltstone, reddish brown to light brown, some green mottling, calcareous.
900	910	100	Siltstone, as above; some sandstone, green, calcareous.
910	930	100	Siltstone, red brown to light brown, as above.

DITCH SAMPLES

Examined by Wright 940 to 980
Snyder ____ to ____

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SAMPLES UNDERLINED	SAMPLES LAGGED (not)
940	950	60	Siltstone, red brown, calcareous, as above.	
		40	Siltstone, brown, as above, some light yellow limestone, IVFA.	
950	960	70	Siltstone, red brown, as above with some mottling.	
		30	Siltstone, brown, as above.	
960	970	80	Siltstone, red brown, as above.	
		20	Siltstone, brown, as above.	
970	980	70	Siltstone, red brown, as above.	
		30	Siltstone, brown, as above.	

DITCH SAMPLES

Examined by Wright 980 to 1220
Snyder ___ to ___
Fields

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED SHOT
980	1010	100	Shale, red to red maroon, well-cored, [illegible], soft to medium, apparently [illegible].	
1010	1020	[illegible]	[illegible], red, [illegible], slightly calcareous, soft to Limestone inclusions.	
1020	1040	[illegible]	Siltstone, [illegible].	
		20	Shale, red [illegible].	
		20	Sandstone, [illegible], very [illegible].	
1040	1060	80	Siltstone, [illegible].	
		20	Shale, [illegible].	
1060	1070	60	Siltstone, [illegible].	
		40	Shale, [illegible].	
1070	1080	80	Shale, [illegible].	
		20	Siltstone, [illegible].	
		10	Sandstone, red, very [illegible], [illegible], light brown.	
1080	1090	90	Shale, [illegible].	
		10	Salt, [illegible], granular.	
1090	1140	100	Shale, [illegible], silty and [illegible], [illegible], light green calcareous [illegible].	
1140	1160	100	Shale, red, [illegible], with [illegible] nodules, appears recemented.	
1160	1170	100	Shale, [illegible] light green [illegible] nodules.	
1170	1180	100	Shale, red, [illegible], [illegible], [illegible].	
1180	1190	100	Shale, [illegible], [illegible], calcareous.	
1190	1200	80	Shale, light red, [illegible], [illegible].	
		20	Shale, red, [illegible], [illegible], gray and white, with tan [illegible].	
1200	1210	90	Shale, light red, [illegible], [illegible].	
		10	Limestone, light [illegible], [illegible].	
1210	1220	100	Shale, [illegible] light red.	

DITCH SAMPLES

Examined by Fields 1220 to 1600
Snyder ____ to ____

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED (NOT)
1220	1230	100	Shale, as above light red, bentonitic, calcareous, mushy.	
1230	1240	100	Shale, light red, silty, very calcareous with few pieces limestone, mottled gray.	
1240	1280	100	Limestone, light purple, mottled gray, very argillaceous.	
1280	1290	100	Limestone, becoming brown purple. III F to MA, part oolcastic.	
1290	1300	100	Limestone, as above, mottled gray.	
1300	1320	100	Shale, light red purple, mottled gray, very calcareous with red streaks and tan limestone nodules.	
1320	1330	100	Shale, as above with streaks of white opaque chert.	
1330	1340	100	Limestone, purple III FA, mottled light gray with rare gray brown nodules.	
1340	1420	100	Limestone, purple, mottled light gray with rare gray brown nodules, III FA.	
1420	1430	100	Shale, light red, mottled gray, very calcareous, very oolcastic.	
1430	1440	80	Shale, as above.	
		20	Sandstone, purple.	
1440	1460	60	Shale, light red, bentonitic, very calcareous	
		40	Sandstone, light red, very fine to silt, very bentonitic, calcareous.	
1460	1480	40	Shale, purple, soft, bentonitic.	
		40	Shale, light gray, bentonitic, soft.	
		20	Shale, medium gray, bentonitic, sandy.	
1480	1500	80	Shale, medium gray.	
		20	Shale, pink, bentonitic, soft.	
1500	1560	100	Sandstone, pink, mottled light gray and green, very fine to coarse, angular to sub-rounded, extremely bentonitic.	
1560	1570	100	Shale, variegated green, light purple.	
1570	1580		Sample missing.	
		80	Shale, brown red, micaceous, silty.	
		40	Shale, light gray, flaky, soft.	
1580	1590	100	Shale, as above, very silty.	
1590	1600	100	Shale, variegated, red and gray, sandy, calcareous.	

DITCH SAMPLES

Examined by [illegible] [illegible] to [illegible]
Snyder ____ to ____

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LAGGED (NOT)
1600	1620	100	Shale, red [illegible], very soft, micaceous.
1620	1630	[illegible]	Shale, brick red, light red, purple, green.
		20	Limestone, medium, conglomeratic, angular to well-rounded, with well-rounded [illegible] limestone [illegible].
1630	1640	[illegible]	Shale, light gray, [illegible], flaky, calcareous.
		[illegible]	Shale, [illegible], flaky, calcareous.
1640	1650	[illegible]	Shale, red, flaky.
		25	Shale, light gray, flaky.
		25	Limestone, light gray, [illegible], [illegible].
		[illegible]	Shale, [illegible] as above, [illegible] fragments of pyrite and carbonaceous material, rare fragments [illegible] chert.
1650	1690	100	Shale, variegated, gray, [illegible] to granular.
1690	1700	[illegible]	Shale, [illegible], medium gray, [illegible].
		20	Sandstone, [illegible], medium [illegible]-grained, fairly well sorted.
1700	1710	60	Shale, light [illegible], [illegible], [illegible].
		20	Shale, dark [illegible], [illegible].
		20	Sandstone, [illegible].
1710	1720	[illegible]	Shale, light gray, [illegible], [illegible] calcareous, mottled ochre.
		[illegible]	Shale, purple, [illegible].
1720	1730	[illegible]	Shale, [illegible].
		20	[illegible], [illegible], very fine, [illegible], slightly calcareous, white and black mica.
1730	1740	80	Sandstone, [illegible] slightly calcareous, white and black mica.
		20	Shale, brown.
1740	1750	100	Siltstone, [illegible] mottled [illegible] calcareous, gray and brown mica.
1750	1760	[illegible]	Shale, [illegible].
		[illegible]	Siltstone, as above.
		[illegible]	Sandstone, white [illegible], fine and angular.

DITCH SAMPLES

Examined by Fields 1760 to 2200
Snyder ___ to ___

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LAGGED (NOT)
1760	1820	100	Sandstone, orange, fine to medium grained, angular to sub-rounded, poorly-sorted, calcareous and bentonitic.
1820	1830	100	Sandstone, as above, very fine to fine, extremely bentonitic.
1830	1860	100	Sandstone, orange, fine, angular to sub-rounded, partly calcareous with rare coarse, well-rounded, orange-stained, frosted grains.
1860	1870	80	Shale, silty, flaky.
		20	Shale, purple, blocky.
1870	1950	100	Sandstone, as above, no coarse grains.
1950	1990	100	Shale, red brown, gray, purple, mottled, calcareous, mushy, micaceous, becoming silty.
1990	2020	50	Shale, as above, silty.
		50	Sandstone, orange, fine, angular to sub-rounded, calcareous.
2020	2050	100	Sandstone, as above.
2050	2060	50	Shale, light gray, soft, mushy, calcareous.
		25	Shale, light red, mushy, calcareous.
		25	Shale, purple, calcareous.
2060	2080	100	Sandstone, orange, fine, sub-rounded, calcareous.
2080	2090	80	Shale, reddish purple, light mottled gray.
		20	Sandstone, as above.
2090	2100	50	Shale, as above, calcareous.
		30	Siltstone, orange, calcareous, with rare nodules.
		20	Sandstone, as above.
2100	2110	60	Shale, as above.
		40	Siltstone, as above.
2110	2170	100	Siltstone, as above.
2170	2180	100	Siltstone, orange red to brown, with rare sub-rounded sandstone grains, mottled gray.
2180	2190	100	Siltstone, red brown to brick red with gray white mottling, non-calcareous.
2190	2200	100	Siltstone, as above, becoming partly argillaceous.

DITCH SAMPLES

Examined by Fields 2200 to 2460
Snyder ___ to ___

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LAGGED (WET)
2200	2220	80	Siltstone, as above, but not so argillaceous.
		20	Shale, red to brown, blocky, calcareous
2220	2230	50	Siltstone, as above.
		30	Shale, as above.
		20	Shale, tan to light brown.
2230	2240	80	Siltstone, as above.
		20	Shale, red to brown, blocky.
2240	2250	100	Siltstone, as above.
2250	2260	100	Siltstone, as above, with streaks of brick red shale.
2260	2270	60	Shale, medium gray to lavender and purple.
		40	Siltstone, as above with subrounded quartz grains.
2270	2280	90	Shale, as above.
		10	Siltstone, as above with rare sub-angular quartz grains.
			2160'-2270' Less than 1% fluorescence on siltstone and cherty microconglomerate, patchy to bright yellow cut fluorescence, very pale to pale brown cut.
2280	2290	100	Shale, as above very calcareous.
2290	2350	100	Siltstone, dark orange brown and mottled light green, slightly calcareous with occasional fine to medium sub-angular sand grains.
2350	2360	100	Siltstone, as above, becoming slightly argillaceous and more calcareous.
2360	2400	100	Siltstone, as above, slightly argillaceous, calcareous.
2400	2410	100	Sandstone, light to dark brown, orange brown, fine to medium, sub-angular to sub-rounded, calcareous, micaceous, argillaceous.
2410	2420	80	Sandstone, as above.
		20	Siltstone, as above.
2420	2430	100	Siltstone, as above, very micaceous (chlorite in part.)
2430	2450	80	Siltstone, as above.
		20	Limestone, green gray to lavender, mottled purple, IVFA, argillaceous.
2450	2460	90	Siltstone, as above.
		10	Limestone, as above.

DITCH SAMPLES

Examined by Fields [illegible] to [illegible]
Snyder ____ to ____

Well [illegible]
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LAGGED (NOT)
2460	2470	50	Siltstone, as above.
		50	Shale, [illegible] (previous).
2470	2480	[illegible]	Siltstone, [illegible] very argillaceous.
		[illegible]	Shale, [illegible] v. silty.
2480	2510	100	Siltstone, [illegible] calcareous.
2510	2520	80	Siltstone, [illegible] brown to [illegible] calcareous, very argillaceous, [illegible].
		20	Limestone, [illegible] to red brown, 17 A, argillaceous.
2520	2530	60	Siltstone, as above.
		40	Limestone, [illegible] red [illegible] 17 A to [illegible], [illegible].
2530	2550	100	Siltstone, as above, [illegible].
2550	2560	50	Siltstone, as above, [illegible].
		50	Shale, orange brown [illegible], very calcareous, very silty.
2560	2580	[illegible]	Siltstone, [illegible]
		[illegible]	Shale, as above.
2580	2590	[illegible]	Siltstone, as above.
		50	Shale, as above.
2590	2600	[illegible]	Siltstone, as above.
		[illegible]	Shale, as above.
2600	2610	60	Shale, [illegible]
		40	Siltstone, as above.
2610	2630	[illegible]	Shale, [illegible] silty.
		[illegible]	Siltstone, as above.
2630	2640	100	Shale, [illegible]
2640	2650	100	Shale, [illegible], with [illegible].
2650	2660	60	Siltstone, as above, [illegible] green inclusions.
		40	Shale, as above.

DITCH SAMPLES

Examined by Fields 2660 to 2840
Snyder ____ to ____

Well ____
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED (NOT)
2660	2670	50	Siltstone as above, micaceous.	
		30	Shale, as above	
2670	2680	70	Shale, as above.	
		30	Siltstone, as above, calcareous.	
2680	2690	90	Shale, as above, [illegible]	
		10	Siltstone, as above, micaceous with green inclusions.	
2690	2700	100	Shale, as above.	
2700	2710	100	Shale, orange brown, dark brown, brick red, very calcareous, very silty, with light green calcareous inclusions and mottling.	
2710	2730	80	Shale, as above.	
		20	Siltstone, light gray to dark brown, calcareous, very argillaceous, micaceous.	
2730	2770	50	Shale, as above.	
		50	Siltstone, as above, light green calcareous inclusions.	
2770	2780	60	Shale, as above, with siltstone inclusions.	
		35	Siltstone, as above.	
		25	Limestone, as above, IVFA.	
2780	2790	100	Shale, as above, siltstone inclusions.	
2790	2800	100	Shale, as above, siltstone inclusions.	
2800	2810	75	Shale, as above with siltstone inclusions.	
		25	Limestone, green gray to white, tan, dark gray green, olive, IVFA.	
2810	2820	60	Shale, as above.	
		30	Dolomite, as above.	
		10	Anhydrite, white, crystalline.	
2820	2830	50	Shale, as above.	
		35	Limestone, as above, IVFA.	
		15	Anhydrite, as above.	
2830	2840	80	Shale, as above.	
		20	Anhydrite, as above.	

DITCH SAMPLES

Examined by [illegible] [illegible] to [illegible]
Snyder ____ to ____

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED (NO)
2840	2850	[illegible]	Sh[illegible], [illegible]	
		20	Sandstone, [illegible] brown [illegible], micaceous, fine to [illegible]	
		20	Dolomite, [illegible]	
		10	Anhydrite, [illegible].	
2850	2860	100	Siltstone, brown [illegible]	
2860	2870	[illegible]	[illegible]	
		30	Sandstone, [illegible]	
		20	Anhydrite, [illegible].	
2870	2880	50	Siltstone, as above.	
		[illegible]	Sandstone, [illegible].	
		20	Anhydrite, as [illegible].	
2880	2890	30	Shale [illegible].	
		30	Siltstone, [illegible]	
		20	Sandstone, [illegible]	
		20	Anhydrite, [illegible]	
2890	[illegible]	[illegible]	Siltstone [illegible].	
		[illegible]	Shale, [illegible].	
		[illegible]	Anhydrite, [illegible]	
29[illegible]	29[illegible]	100	S[illegible], [illegible], with [illegible] [illegible]	
2930	2940	[illegible]	Siltstone, [illegible].	
		[illegible]	Shale, [illegible]	

DITCH SAMPLES

Examined by Fields [illegible] to [illegible]
Snyder [illegible] to

Well 1
Field or Area North Boundary Butte
No.

FROM	TO	%	SHOWS UNDERLINED / SAMPLES LAGGED
2940	2950	60	Siltstone, [illegible] brown, calcareous with anhydrite, argillaceous, micaceous.
		20	Shale, brown, calcareous, blocky, silty.
		20	Dolomite, tan to light gray green, IVFA.
2950	2960	50	Siltstone, as above, with anhydrite inclusions.
		30	Dolomite, as above, olive red brown.
		20	Siltstone, as above.
2960	2970	80	Siltstone, as above.
		20	Dolomite, as above.
2970	2980	[illegible]	Siltstone, as above.
		[illegible]	Dolomite, as above, [illegible] brown [illegible] limestone in part.
2980	2990	[illegible]	Siltstone, as above.
		30	Dolomite, as above, [illegible]
		10	Anhydrite, white, [illegible].
2990	3000	[illegible]	Siltstone, as above.
		30	Dolomite, [illegible] to [illegible] IVFA, grading to limestone.
		20	Anhydrite, white, mottled green.
3000	3010	50	Siltstone, as above, very argillaceous.
		20	Shale, red, mottled brown and green, slightly calcareous, blocky to fissile.
		20	Limestone, olive, [illegible].
		10	Dolomite, as above.
3010	3020	40	Siltstone, as above.
		25	Shale, as above.
		25	Shale, green, mottled brown, [illegible].
		10	Dolomite, as above.
3020	3030	100	Limestone, olive green, IVFA-[illegible], dolomitic, sandy, micaceous, with abundant [illegible].

DITCH SAMPLES

Examined by Fields 3040 to 3220
Murray ___ to ___

Well 1
Field or Area North Boundary Butte
Unit

FROM	TO	%	SHOWS UNDERLINED SAMPLES / LAGGED
3040	3060	50	Limestone, light olive green, IVFA.
		50	Dolomite, dark olive green, III VFA, with abundant crystalline anhydrite.
3060	3080	100	Siltstone, brown, very calcareous, argillaceous, with abundant mica and anhydrite inclusions.
3080	3090	80	Siltstone, as above.
		20	Anhydrite, granular to crystalline.
3090	3100	70	Siltstone, as above.
		20	Anhydrite, as above.
		10	Dolomite, light gray to olive green, IVFA.
3100	3110	100	Limestone, white, gray, tan, IVFA.
3110	3120	80	Siltstone, as above.
		20	Limestone, as above.
3120	3130	100	Siltstone, brown, very calcareous, sandy.
3130	3170	100	Siltstone, brown, very calcareous, with abundant anhydrite, sandy.
3170	3180	60	Siltstone, brown, very calcareous, sandy, with anhydrite.
		40	Shale, purple and mottled green, with abundant anhydrite.
3180	3190	40	Shale, as above.
		40	Siltstone, as above.
		20	Limestone, pink, mottled light gray, IVFA.
3190	3200	50	Shale, as above.
		50	Siltstone, as above.
3200	3210	40	Shale, brown, calcareous, blocky, micaceous.
		30	Shale, green, with anhydrite inclusions.
		30	Shale, purple and mottled green as above.
3210	3220	100	Shale, light green, brown, lavender, purple, slightly calcareous.
3220	3230	60	Shale, pink, blocky, very calcareous, with anhydrite.
		30	Shale, variegated, as above.

DITCH SAMPLES

Examined by Fields 3230 to 3320
Murray ___ to ___

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	Not SAMPLES LAGGED
3230	3240	100	Shale, light brown, gray, lavender mottling, soft, mushy, calcareous, micaceous.	
3240	3250	90	Shale, as above.	
		10	Limestone, white, III VFA.	
3250	3260	50	Shale, as above.	
		10	Dolomite, gray-green, III VFA, sandy, with abundant anhydrite.	
		10	Limestone, white, light gray, III VFA.	
3260	3270	40	Shale, as above.	
		30	Siltstone, green, slightly calcareous.	
		30	Siltstone, brown, calcareous, micaceous with anhydrite inclusions.	
3270	3280	60	Siltstone, brown, as above.	
		30	Shale, brown, gritty, fissile, micaceous, with anhydrite.	
		10	Dolomite, light gray-green, IVFA, very calcareous.	
			Gas in Mud: 3270-3280, 4-5 Hydrator units 3280-3290, 2/0-10/0 Hydrator units 3290-3280, 2/0-4/0 Hydrator units	
3280	3290	60	Siltstone, brown, as above.	
		20	Dolomite, green, IIF VFA, silty in part.	
3290	3300	70	Siltstone, brown, as above.	
		20	Shale, light green, calcareous, blocky, micaceous.	
		10	Sandstone, light green, fine grained, sub-rounded, with anhydrite inclusions	
			Gas - Mud: 3280-3290, 4/0 Hydrator units.	
3300	3310	50	Shale, light brown, dark brown, lavender, calcareous, very silty, soft, mushy.	
		40	Siltstone, brown, calcareous, very argillaceous with some sand grains and anhydrite.	
		10	Shale, light gray, calcareous.	
3310	3320	70	Shale, light brown, dark brown, lavender, as above.	
		30	Siltstone, as above, micaceous.	

DITCH SAMPLES

Examined by Fields 3320 to [illegible]
Snyder ___ to ___

Well 1
Field or Area North Boundary Butte
Nor

FROM	TO	%	SHOWS UNDERLINED	SAMPLES FLAGGED
3320	3330	50	Siltstone, as above.	
		30	Shale, as above.	
		20	Limestone, gray to olive green, IV?A.	
3330	3340	60	Siltstone, as above, becoming brick red.	
		20	Shale, as above.	
		10	Sandstone, red, fine to medium, sub-angular, slightly calcareous, micaceous.	
		10	Limestone, white to tan, III ?A.	
3340	3350	80	Siltstone, as above, with frosted sand grains.	
		10	Sandstone, red to brown and olive, with anhydrite inclusions.	
		10	Anhydrite, white, crystalline to granular.	
3350	3360	60	Limestone, olive, III ?A, in part argillaceous.	
		40	Dolomite, light gray, brown gray, IV?, with anhydrite inclusions.	
3360	3370	30	Shale, medium to dark gray, with anhydrite inclusions, silty in part.	
		30	Siltstone, as above, becoming very sandy.	
		10	Dolomite, as above.	
		30	Anhydrite, as above.	
3370	3380	50	Shale, as above, becoming very calcareous.	
		30	Siltstone, as above.	
		10	Dolomite, as above.	
		10	Anhydrite.	
3380	3390	60	Shale, as above, brown in part.	
3390	3400	60	Dolomite, as above, dark gray.	
		40	Shale, as above.	
3400	3410	60	Siltstone, light brown to purple, sandy, calcareous with anhydrite inclusions, micaceous.	
		20	Shale, as above.	
		20	Shale, brown to dark brown, calcareous.	

DITCH SAMPLES

Examined by Fields 3410 to 3510
Snyder ___ to ___

Well 1
Field or Area North Boundary Butte
Not

FROM	TO	%	SHOWS UNDERLINED SAMPLES/LAGGED
3410	3420	70	Siltstone, as above.
		30	Shale, light brown to dark brown as above.
3420	3430	60	Siltstone, as above.
		40	Shale, olive, very calcareous, mottled gray with anhydrite inclusions.
3430	3440	50	Shale, as above.
		30	Shale, light brown, dark brown, red brown, calcareous, micaceous, soft with occassional sand grains.
		20	Anhydrite. (brown shale with anhydrite inclusions).
3440	3450	40	Shale, olive, as above.
		40	Shale, light brown, as above.
		20	Siltstone, as above.
3450	3460	60	Shale, olive, very calcareous, micaceous.
		40	Shale, lavender to purple, slightly calcareous, mottled gray with much crystalline anhydrite.
3460	3470	60	Shale, red, mottled gray, soft, with anhydrite inclusions.
		20	Shale, olive, as above.
		20	Shale, brown, as above.
3470	3480	50	Shale, olive, as above.
		30	Shale, red, as above.
		20	Shale, brown, as above, very sandy.
3480	3490	100	Shale, dark red brown, soft, silty, calcareous, with anhydrite inclusions, mottled gray.
3490	3500	50	Shale, as above.
		30	Shale, yellow brown, mottled red, slightly calcareous, blocky, sandy.
		20	Dolomite, olive to yellow brown, FXFA, with occasional coarse sand grains.
3500	3510	60	Shale, yellow brown, as above with few small anhydrite inclusions.
		40	Shale, red brown, lavender, purple, mottled, blocky.

DITCH SAMPLES

Examined by Fields 3510 to ____
Snyder ____ to ____

Well #1
Field or Area North Boundary Butte
Not

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
3510	3520	40	Shale, red brown, light brown, mottled gray, very calcareous, soft, silty.	
		25	Siltstone, gray brown to shale, slightly calcareous, with mica and calcite inclusions, very argillaceous.	
		35	Siltstone, brown, calcareous, sandy, micaceous.	
3520	3530	75	Siltstone, brown, as above.	
		25	Shale, as above with trace coarse sand grains.	
3530	3540	60	Siltstone, brown, as above.	
		30	Shale, brown to green gray, mottled green, very calcareous, soft, silty.	
		10	Limestone, gray, green, TFA.	

DITCH SAMPLES

Examined by Fields 3300 to 3695
Snyder ___ to ___

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LAGGED beginning 3600
			Gas: Mud, 3280 - 3510, 0-4 Hycalog units 3510 - 3540, 3-10 Hycalog Units Cuttings, 3280 - 3540, 0 Hycalog Units
3540	70	100	Siltstone, brown, as above, in part mushy.
3570	85	100	Siltstone, brown, calcareous, argillaceous, with much white mica and some sand grains, soft, no anhydrite.
3585	90	100	Siltstone, as above, with anhydrite inclusions.
3590	3605	100	Siltstone, as above, no anhydrite
3605	10	60	Siltstone, as above
		40	Shale, brown, abundant calcite, silty, mushy.
3610	15	50	Shale, as above
		50	Siltstone, as above
3615	20	100	Siltstone, as above, becoming very calcareous and very argillaceous, soft
3620	25	60	Shale, as above
		40	Siltstone, as above
3625	65	100	Siltstone, as above, but harder, very calcareous
3665	80	100	Siltstone, as above, with soft anhydrite inclusions
			Shows, 3660 - 70, 10% yellow fluoresence, yellow to bright yellow cut fluoresence, very pale brown cut. 3670 - 75, 40% yellow fluoresence, as above 3675 - 80, 5% yellow fluoresence, as above
			Gas: Mud 3540 - 72, 10 Hycalog units maximum 3572 - 78, 4 Hycalog units maximum 3578 - 3610, 20 Hycalog units maximum 3610 - 80, 8 Hycalog units maximum Cuttings 3540 - 90, 0 3590 - 96, 4 Hycalog units maximum 3596 - 3606, 6 Hycalog units maximum 3606 - 80, 4 Hycalog units maximum.
3680	85	100	Shale, light brown, very calcareous, mushy, soft, with sand grains.
3685	90	50	Shale, light brown, very calcareous, mushy, silty
		50	Siltstone, brown, calcareous, argillaceous, soft
3690	95	80	Shale, as above
		20	Siltstone, as above

DITCH SAMPLES

Examined by Fields 3695 to 3770
Snyder ____ to ____

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
3695	3700	70	Shale, as above	
		30	Siltstone, as above	
3700	05	60	Siltstone, as above	
		40	Shale, as above	
3705	10	100	Shale, as above	
3710	15	70	Shale, as above	
		30	Siltstone, as above	
3715	20	60	Shale, as above	
		40	Siltstone, as above	
3720	25	100	Siltstone, as above	
3725	30	60	Siltstone, as above	
		40	Shale, as above	
3730	35	70	Siltstone, as above	
		20	Shale, as above	
		10	Dolomite gray, IIIVFA	
3735	40	60	Siltstone, as above	
		40	Shale, as above	
3740	45	70	Siltstone, brown, calcareous, argillaceous, micaceous, soft.	
		30	Shale, light brown, very calcareous, very silty.	
3745	50	50	Shale, as above	
		50	Siltstone, as above	
3750	55	100	Siltstone, as above	
3755	60	60	Shale, as above	
		40	Siltstone, as above	
3760	65	70	Shale, as above	
		30	Siltstone, as above	
3765	70	70	Siltstone, as above	
		30	Limestone, white to light gray, IVFA, very sandy	

DITCH SAMPLES

Examined by Fields 3770 to 3900
Snyder to

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
3770	80	100	Limestone,	as above.
3780	85	100	Limestone,	as above, becoming very sandy.
3785	90	100	Limestone,	as above, becoming salmon red
3790	3800	100	Limestone,	as above, white to light gray.
3800	25	100	Limestone,	as above, less sandy, mottled olive green.
3825	30	100	Limestone,	as above, mottled brown and purple, extremely sandy, IIIMA.
3830	40	100	Limestone,	as above, IVFA-IIIMA.
3840	45	80	Limestone,	as above.
		20	Siltstone,	red brown, micaceous, very calcareous, with limestone nodules.
3845	50	75	Limestone,	as above, with orange chert, less sandy.
		25	Siltstone,	light brown, calcareous, micaceous.
3850	55	50	Siltstone,	tan to red brown, micaceous, calcareous, hard.
		30	Limestone,	IVFA, gray green, sandy (samples poor).
		20	Shale,	red, silty, calcareous, hard, blocky.
3855	60	60	Limestone,	as above, with chert.
		40	Shale,	as above.
3860	65	100	Limestone,	as above, with chert.
3865	70	100	Limestone,	as above, very sandy in part, crinoid fragment.
3870	75	100	Limestone,	as above, very sandy in part, crinoid fragment, mottled brown.
3875	80	60	Limestone,	as above.
		40	Sandstone,	light gray brown, very calcareous, very fine.
3880	85	100	Sandstone,	as above, with crinoid and bryozoan(?) fragments
3885	90	60	Sandstone,	olive in part
		40	Limestone,	as above, cherty, gray black
3890	95	100	Sandstone,	as above, very calcareous
3895	3900	80	Sandstone,	as above
		20	Limestone,	as above

[redacted] DITCH SAMPLES [redacted]

Examined by Barrs 3900 to 3945
Snyder ___ to ___

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
3900	05	70	Siltstone, gray brown, red brown, micaceous, calcareous.	
		20	Shale, brick red, mottled green, calcareous, silty, hard.	
		10	Limestone, as above.	
3905	10	60	Siltstone, as above.	
		20	Shale, as above.	
		20	Dolomite, tan, red, IVFA, cherty.	
3910	15	100	Limestone, as above, in part dolomitic, sandy.	
3915	20	70	Siltstone, as above.	
		20	Shale, red to red brown, calcareous, silty, blocky, soft.	
		10	Limestone, as above.	
3920	25	100	Siltstone, as above.	
3925	30	65	Siltstone, as above.	
		15	Limestone, red, buff, IVFA, very silty.	
3930	35	65	Limestone white, IVFA-IIIFA, cherty, fragmental, sandy.	
		35	Sandstone, green gray, very fine, very calcareous, poorly-sorted, subangular to subrounded.	
3935	45	100	Limestone, as above.	

Gas: Mud: 3735 - 62, 18 maximum
3762 -3836, 10 maximum, 2 average
3836 - 48, 14
3848 -3910, 10 maximum, 6 average
3910 - 45, 14 maximum

Cuttings: 3735 - 62, 4 maximum
3762 -3860, 4 maximum, 2 average
3860 -3945, 0

Note: all units Hycalog

#1

DITCH SAMPLES

Examined by: [illegible] [illegible] to 4085
Snyder ___ to ___

Well: 1
Field or Area: North [illegible] [illegible]

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
3945	3950	75	Limestone, tan to light gray, [illegible] with orange cherty fragments.	
		25	Shale, dark [illegible] [illegible] calcareous [illegible]	
3950	3955	80	Siltstone, medium gray, very calcareous	
		20	Shale, light gray, very soft, calcareous	
3955	3960	75	Siltstone, as above	
		15	Limestone, cream, IVFA	
		10	Shale, as above	
3960	3965	60	Siltstone, as above	
		40	Limestone, medium gray, [illegible]	
3965	3970	100	Limestone, as above	
3970	3975	80	Limestone, as above	
		20	Shale, light gray, very [illegible]	
3975	4010	100	Siltstone, red brown [illegible] [illegible] sandstone, micaceous, calcareous to very soft	
4010	4020	100	Sandstone, red brown, [illegible] very calcareous, poorly-sorted	
4020	4025	80	Limestone, tan to light [illegible] IVFA	
		20	Shale, medium to dark gray, very [illegible] calcareous	
4025	4035	100	Limestone, tan to light gray, [illegible] argillaceous	
4035	4040	75	Limestone, as above	
		25	Shale, light [illegible] blocky	
4040	4055	100	Siltstone, red brown, [illegible] calcareous [illegible] micaceous	
4055	4060	100	Sandstone, white to [illegible] subrounded, poorly-sorted [illegible] calcareous	
4060	4065	100	Siltstone, purple, [illegible]	
4065	4070		No sample	
4070	4075	100	Limestone, white to tan, IVFA, [illegible]	
4075	4080	100	Siltstone, red brown, grading to sandstone, very fine, calcareous	
4080	4085	100	Sandstone, gray to red [illegible] very fine [illegible], poorly-sorted, calcareous	

DITCH SAMPLES

Examined by Baars 4085 to 4215
Snyder ____ to ____

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
4085	4105	100	Siltstone, gray, becoming micaceous.	
4105	4110	60	Limestone, white to tan, I-IIVFA, sandy, with orange chert fragments.	
		40	Sandstone, tan, white, fine to very fine, poorly-sorted, calcareous.	
4110	4115	100	Limestone, white to tan, I-IIIVF-FA, sandy in part.	
4115	4120	100	Limestone, becoming very sandy.	
4120	4125	50	Limestone, white to tan, I-IIIVF-FA, sandy to very sandy, with chert fragments.	
		50	Sandstone, tan to gray, very fine to fine, calcareous.	
4125	4129		Depth correction.	
4130	4135	100	Cavings.	
4135	4140	100	Limestone, light gray to tan, III VFA, argillaceous streaks, sandy in part.	
4140	4150	100	Limestone, tan, light red, III/IVFA, sandy.	
4150	4155	50	Limestone, as above.	
		50	Siltstone, tan to brown, micaceous, very calcareous.	
4155	4160	100	Limestone, white to tan, IVFA, sandy.	
4160	4165	90	Limestone, as above.	
		10	Anhydrite, with gray chert fragments.	
4165	4170	80	Limestone, as above.	
		20	Shale, medium gray, slightly calcareous, soft.	
4170	4175	100	Limestone, as above, becoming gray to brown, with orange chert fragments.	
4175	4180	75	Limestone, as above.	
		25	Siltstone, gray to brown, micaceous, very calcareous.	
4180	4185	100	Limestone, medium gray, I/III VFA, sandy.	
4185	4190	100	Limestone, gray to gray brown, III VFA, argillaceous.	
4190	4195	100	Limestone, tan, I-III VFA, sandy.	
4195	4200	90	Limestone, as above.	
		10	Chert, tan, translucent.	
4200	4205	70	Limestone, as above.	
		30	Chert, orange, as above.	
4205	4210	90	Limestone, white to tan, I-III VFA, sandy.	
		10	Chert, as above.	
4210	4215	100	Limestone, as above.	

DITCH SAMPLES

Examined by Baers 4210 to 4225
Snyder ___ to ___

Well ___
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
4215	4225	100	Limestone, tan, IVFA, sandy in part	
4225	4230	100	Limestone, light gray, III FA, slightly dolomitic in part	
4230	4240	100	Limestone, white to tan, IVFA, sandy in part	
4240	4245	50	Limestone as above	
		50	Siltstone, gray, very calcareous	
4245	4250	100	Siltstone, gray to light brown, very calcareous	
4250	4255	75	Limestone, tan, I/III/FA, sandy	
		25	Siltstone as above	
4255	4265	100	Limestone, tan to light brown, III/IVFA, very silty	
4265	4270	100	Limestone, as above, IIIVFA.	
4270	4275	100	Limestone, gray to light brown, III/F[illegible] in part	
4275	4285	100	Limestone, tan, I/III/FA, sandy, with orange chert	
4285	4300	100	Limestone, dark gray, I/III/FA, sandy	
4300	4305	100	Limestone, light gray, IIIVFA, very silty, [illegible] argillaceous	
4305	4320	50	Limestone, light gray, IIIVFA, silty	
		50	Shale, dark gray, black, calcareous, silty, becoming argillaceous	
4320	4330	100	Limestone, tan, IVFA, sandy in part	
4330	4335	100	Limestone, tan, I-IIIVFA	
4335	4345	100	Limestone, white to tan, I-IIIVFA	
4345	4350	100	Limestone, dark brown, gray, IIIVFA, slightly sandy	
4350	4355	100	Limestone, tan to light brown, IIIVFA, silty	
4355	4360	100	Shale, medium to dark gray, soft, calcareous with fine limestone grains	
4360	4370	100	Limestone, tan, III/FA	
4370	4375	100	Limestone, tan, I/FA, slightly silty	
4375	4385	100	Limestone, tan, IIIVFA, slightly silty	
4385	4390	100	Limestone, tan I/III/FA, silty in part	
4390	4395	100	Limestone, cream, dark tan, I/III/FA, sandy in part, with milky chert fragments	

DITCH SAMPLES

Examined by Bea [illegible] 4395 to [illegible]
Snyder ____ to ____

Well ____
Field or Area [illegible] Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
4395	4400	100	Limestone, [illegible] white to tan	
4400	4405	30	Limestone, [illegible] I, IIVFA, [illegible]	
		20	Chert, [illegible]	
4405	4410	100	Limestone, [illegible], IIIL/IVFA, [illegible], in part	
4410	4415	100	Limestone, white to [illegible], I, IIVFA, sandy in part	
4415	4420	100	Limestone, [illegible] with fossil fragments	
4420	4425	100	Limestone, [illegible] I/IIFA	
4425	4430	100	Limestone, [illegible] gray, IIIVFA, [illegible] in part	
4430	4435	100	Limestone, [illegible] brown gray, IIIVFA, argillaceous in part	
4435	4440	100	Limestone, [illegible] I/IIIVFA [illegible] part	
4440	4445	100	Limestone, [illegible] gray I/IIIVFA [illegible] chert fragments	
4445	4450	90	Limestone, [illegible] I,I IVFA [illegible] in part	
		15	Shale, [illegible] calcareous	
4450	4455	80	Limestone, [illegible]	
		20	Chert, [illegible] translucent	
4455	4460	100	Limestone, [illegible]	
4460	4465	70	Limestone, [illegible]	
		30	Shale, [illegible] gray	
4465	4470	100	Limestone, [illegible] light brown, I/II [illegible] oolitic	
4470	4475	100	Limestone, [illegible] I/IIIVFA, [illegible]	
4475	4480	95	Limestone, [illegible] gray, IIIVFA	
		5	Shale, dark gray, calcareous, soft	
4480	4485	100	Limestone, [illegible] sandy	
4485	4490	100	Limestone, [illegible] IIIA [illegible]	
4490	4495	100	Limestone, [illegible] IIIVFA	
4495	4500	50	Limestone, [illegible]	
		50	Shale, [illegible] dark gray, soft, slightly [illegible]	

DITCH SAMPLES

Examined by Baars 4500 to [illegible]
Snyder ____ to ____

Well ____
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
4500	4505	100	Siltstone, light red brown, very calc[illegible] (100% cavings?)	
4505	4510	100	Limestone, [illegible] to white, III/IVFA ([illegible])	
4510	4515	100	Limestone, [illegible] brown, III/IVFA	
4515	4520	100	Limestone, tan, I/IIVFA, with chert, tan [illegible] orange	
4520	4535	100	Limestone, as above, becoming sandy in part and pseudo oolitic in part	
4535	4540	80	Limestone, as above	
		20	Shale, calcareous, slightly anhydritic	
4540	4545	100	Limestone, tan, I/IIIVFA sandy in part, with smoky chert fragments	
4545	4550		No sample	
4550	4555	75	Limestone, tan, IVFA, [illegible] with calcite veinlets and milky chert	
		25	Shale, light to medium gray, [illegible] calcareous, sandy in part	
4555	4560	100	Limestone, white to tan, I/IIVFA [illegible] oolitic in part, brown chert fragments	
4560	4565	90	Limestone, as above, abundant [illegible]	
		10	Shale, as above, [illegible] calcareous	
4565	4570	100	Limestone, [illegible], IVFA, [illegible]	
4570	4575	40	Limestone, white to [illegible], I/IIVFA, [illegible] in part	
		30	Limestone, [illegible], IVFA	
		30	Shale, medium gray, slightly calcareous, silty	
4575	4580	75	Limestone, as above	
		25	Shale, as above	
4580	4585	75	Shale, as above, very calcareous	
		25	Limestone, as above	
4585	4595	100	Limestone, as above	
4595	4600	60	Limestone, as above	
		40	Shale, as above becoming extremely [illegible]	

DITCH SAMPLES

Examined by Snyder, Fields 4600 to 4735 to

Well

Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
			Gas	
			DST I/2 (Continued)	
			4534- 40, 16/10: Maximum	
			4540- 68, 16/20: Maximum	
			4568- 86, [illegible] Maximum	
			4586- 96, [illegible] Maximum	
			4596-4600, [illegible] Maximum	
4600	4603		No samples	
4603	4638		Core # 1	
4638	4639		Core # 2	
4639	4640		No samples	
4640	4646		Core # 3	
4646	4660		Core # 4	
4660	4671		Core # 5	
4671	4675	100	Limestone, medium gray to tan, I-II VFA, slightly dolomitic, with chert	
4675	4680	100	Limestone, as above	
4680	4685	100	Limestone, as above, with abundant chert, tan opaque, with pyrite inclusions	
4685	4690	100	Limestone, as above with very abundant chert.	
4690	4695	100	Limestone, as above, becoming light tan, less dolomitic, less chert.	
4695	4698		No samples	
4698	4724		Core #6	
4724	4725	80	Limestone, light gray tan, I-II VFA to I-II VF-MA	
		20	Limestone, white to light gray, II VFA. 1% Spotty blue yellow fluorescence, yellow cut fluorescence.	
4725	4730	80	Limestone, as above, light gray-tan.	
		20	Limestone, light gray-white, II VFA as above.	
4730	4735	100	Limestone, gray to tan, I-III F-L [illegible] + [illegible] (possibly vuggy), fracture mostly open. 15% spotty but abundant blue yellow fluorescence medium yellow cut fluorescence.	

DITCH SAMPLES

Examined by Bakrs 4600 to
Snyder to

Well
Field or Area East Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES BAGGED

4600 Continued

Gas (Hycalog Units)

	Mud Total/Methane		Cuttings T/M	
3940-	60,	4/1	3960-4040,	0/0
3960-4016,			4040-	50, 4/2: Maximum
4016-	38,	6/4	4050-	56, 6/8: Maximum
4038-	40,	10	4052-	56 2/2
4040-	42,	13	4056-4[illegible],	0/0
4042-	48,	12/4	4[illegible]-	40, 2/2
4046-	50,	20/16	4140-4572,	0/0
4050-	52,	8/8	4572-	94, 4/4: Maximum
4052-	56,	4/4	4594-	96, 6/6
4056-	66,	6/6	4596-4600,	4/4
4066-	76,	32/10		
4076-	80,	8/4: Maximum		
4080-	84,	14/10		
4080-4174,		6/6. Maximum		
4174-4218,		12/6: Maximum		
4218-	90,	8/4: Maximum		
4[illegible]-4420,		12/10: Maximum		
4410-	16,	16/8 Maximum		
4416-	24,	20/12: Maximum		
4424-	30,	8/4: Maximum		
4436-	50,	18/12: Maximum		
4450-	62,	12/8: Maximum		
4462-	72,	8/6: Maximum		
4472-4534,		8/4: Maximum		

PD 4-P 8-50

WEEK ENDING February 10, 1955

CORE FROM 4603 TO 4634

CORES EXAMINED BY Baars, Snyder

SHELL OIL COMPANY
CORE RECORD

AREA OR FIELD North Boundary Butte

COMPANY Shell Oil

LEASE AND WELL NO. 1

NO. 1	FROM 4603	TO 4638	RECOVERED 35'	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS OIL—GAS CORE OR DITCH
	4603	4604	1'	Shale, medium gray, slightly calcareous, with calcite crystals, very dense, hard, massive			
	4604	4606	2'	Shale, dark gray, slightly calcareous, thinly laminated, fossiliferous		0°	
	4606	4609	3'	Shale, dark gray to black faintly calcareous, slightly fossiliferous, dense, hard			very pale yellow fluorescence, patchy over fresh surface. Pale yellow cut fluorescence
	4609	4610	1'	Shale, dark gray to black, slightly calcareous, dense, hard, 1" horizontal bedding		0°	
	4610	4617	7'	Shale, as above becoming moderately calcareous with abundant fossils			
	4617	4620	3'	Shale, as above, becoming very carbonaceous			
	4620	4621	1'	Shale, black, very calcareous, very fossiliferous, with abundant calcite crystals			
	4621	4622	1'	Limestone, brown I-IVFA, argillaceous, round crystalline anhydrite in vertical joints, also h[illegible] joints		0°	
	4622	4623	1'	Shale, black extremely carbonaceous, slightly calcareous			
	4623	4626	3'	Limestone, as above at interval 4621-22			
	4626	4627	1'	Limestone, I-IIIVFA-MA, argillaceous, pseudo-oolitic			
	4627	4630	3'	Shale, black, dense, hard, non calcareous, extremely carbonaceous			
	4630	4631	1'	Shale, as above, with limestone nodules			
	4631	4632	1'	Shale, dark gray to black, non calcareous appears to be dolomitic			
	4632	4633	1'	Shale, as above very dolomitic			
	4633	4634	1'	Dolomite, dark gray, IIIVF-FA, argillaceous			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%). 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%). 2-CLAY OR SHALE AND SAND (SAND 25-50%). 3-SAND WITH SHALE STREAKS (SAND 50-90%). S-SAND (90-100%).

NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

FD 4-B 8-50

SHELL OIL COMPANY

CORE RECORD

WEEK ENDING February 11, 1955

CORE FROM 4634 TO 4655.9

CORES EXAMINED BY Bears, Snyder

AREA OR FIELD North Boundary Butte

COMPANY Shell Oil Company

LEASE AND WELL NO 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS OIL—GAS / CORE OR DITCH
				(Continued)			
1	4634	4635	1'	Dolomite, as above, becoming calcareous			
	4635	4636	1'	Limestone. I/IIIVFA, brown, slightly fossiliferous, slightly argillaceous			Medium yello fluorescence 15% fresh su face, med cut fluores
	4636	4638	2'	Limestone, brown, IVFA, in part stylolitic and carbonaceous, also cherty			
2	4638	4639	05'				
	4638	4638.5	0.5'	Limestone, tan. IVFA, sandy, with recrystalized calcite in tight 45° fracture			None
3	4640	4646	4'				
	4640	4643	3'	Limestone, light gray to tan, IVFA, slightly fossiliferous, with occasional calcite rhombs, slightly pyritic occasionally recemented at fracture.		0°	
	4643	4643.5	0.5'	Chert, dark brown gray, opaque			
	4643.5	4644	0.5'	Limestone, tan, IVFA, fossiliferous, pyrite			
				Occasional from surface and scarce (2-8%) dull brown yellow fluorescence brownish yellow cut fluorescence, no cut. Sample fractured at 4643.4 displayed very slight oil staining. Also oil stains on slickenside at 4643'. Petroleum odor found on fresh surface at 4644.43.			
4	4646	4660	14'				
	4646	4651.7	5.7'	Limestone, tan gray, IVFA, slightly to very dolomitic, occasional crinoid stem			
	4651.7	4652.5	0.8	Chert, dark brown gray, opaque, nodular			
	4652.5	4655.6	3.1'	Limestone, as above			
	4655.6	4655.9	0.3	Chert, as above			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%) 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%) 2-CLAY OR SHALE AND SAND (SAND 25-60%) 3-SAND WITH SHALE STREAKS (SAND 60-90%) S-SAND (90-100%)

NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

PD 4-B 8-50

SHELL OIL COMPANY

CORE RECORD

WEEK ENDING February 12, 1955 — AREA OR FIELD North Boundary Butte

CORE FROM 4655.9 TO 4702 — COMPANY Shell Oil Company

CORES EXAMINED BY Baars & Snyder — LEASE AND WELL NO. 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS OIL—GAS CORE OR DITCH
				(Continued)			
	4655.9	4659.7	3.8'	Limestone, as above			
	4659.7	4660	0.3'	Chert, as above			
				Rare spotty brownish yellow to yellow fluorescence, yellow cut fluorescence, no cut on occasional fresh surfaces and tight rehealed fractures			
5	4660	4671	11'				
	4660	4661	1'	Limestone, tan to gray, IVFA slightly dolomitic with tight dolomite filled 45° fractures. Ground mass chert with pyrite grains			Gas in mud 4660-71. O/C
	4661	4663	2'	Limestone, as above, with chert nodules, dark gray brown, opaque (smoky)			
	4663	4663.8	0.8'	Chert, nodular, dark gray brown (smoky), fractured but tight			
	4663.8	4666.2	2.4	Limestone, as above with vertical stylolites, very hard, dense, cherty			
	4666.2	4667	0.8'	Limestone, as above, with very abundant chert nodules			
	4667	4668.6	1.6	Limestone, tan gray IVFA, dense to hard with occasional fossiliferous fragments			
	4668.6	4670.8	2.2'	Limestone, as above but with chert nods			
	4670.8	4671	0.2'	Chert, dark gray, very dense, fractured, secondary calcite-filled			
				No oil shows			
6	4698	4724	26'	Limestone			
	4698	4700	2'	Limestone, light to medium gray, IM-LA+50 C_{20}, Oil staining and minor amount bleeding, light brown oil, on fracture surfaces			Bleeding oil from porous zone and fractures. Ligh
	4700	4702	2'	Limestone, as above, IVF-MA, stylolitic, fossiliferous, carbonaceous in part, with calcite filled 45° fractures			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%) 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%) 2-CLAY OR SHALE AND SAND (SAND 25-60%) 3-SAND WITH SHALE STREAKS (SAND 60-90%) 4-SAND (90-100%)
NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND

PD 4-B 8-50

SHELL OIL COMPANY

CORE RECORD

WEEK ENDING February 1[illegible], 1955

CORE FROM 4702 TO 4724

CORES EXAMINED BY Snyder

AREA OR FIELD North Boundary Butte

COMPANY Shell Oil

LEASE AND WELL NO. 1

NO.	FROM	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATIONS OIL—GAS CORE OR DITCH
				(Continued)			
	4702	4703	1'	Limestone, as above, IF-MA+80 C_{15}. Vertical - 45° oil filled fractures, also porous section bleeding oil as above			to medium bright yell[ow] fluorescence and oil f[luor]escence, [...]ty, to unif[orm]
	4703	47[illegible]	1[illegible]	Limestone, as above. IVF-MA with carbonaceous streaks and vugs, stylolite 45° [illegible] calcite filled fractures some open, fossiliferous			
	4704	47[illegible].9	.9	Limestone, as above IVFA spotty with I.[illegible] [illegible] ± [illegible]) + 20 [illegible] + [illegible]D Bleeding thin light brown oil from po[illegible] and from some fractures			
	47[illegible].9	47[illegible].5	[illegible]	Limestone [illegible] IVF-MA [illegible] filled vertical fractures, carbon streaks, fossiliferous			
	4716.5	4724	[illegible]	Limestone dark to medium gray, IVFA + 20 [illegible] + 10 [illegible] + [illegible]D porous sections oil stained and bleeding [illegible] slightly			

SYMBOLS: C-CLAY OR SHALE (SAND 0-5%). 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-25%). 2-CLAY OR SHALE AND SAND (SAND 25-60%). 3-SAND WITH SHALE STREAKS (SAND 60-90%). S-SAND (90-100%).
NOTE: SHOW FLUID CONTENT AS IN STANDARD LEGEND.

DITCH SAMPLES

Examined by Snyder 4735 to 4820
Fields to

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
4735	4750	100	Limestone, light gray, white, II VFA to II/III F-LA + 10 B_{5-10}, with minute fracturing, 10-15% uniform blue yellow fluorescence, medium yellow cut fluorescence.	
4750	4765	100	Limestone, light gray to tan, II FA + 10-20 B_5, IVFA and IIIMA + B_2, 10-20% spotty yellow fluorescence, medium yellow cut fluorescence.	
4765	4770	60	Limestone, as above.	
		40	Limestone, black to dark gray IVFA, very argillaceous, 5% shows as above.	
4770	4775	50	Limestone, as above.	
		50	Shale, dark gray to black, fissile, slightly calcareous.	
4775	4780	60	Shale, as above.	
		40	Limestone, as above	
4780	4785	75	Shale, as above.	
		25	Limestone, as above.	
4785	4790	40	Limestone, dark gray to light tan, I-III VFA.	
		30	Limestone, IVFA, as above.	
		30	Shale, as above.	
4790	4795	90	Limestone, dark gray, brown, tan, I-II-III VF-FA + trace $B_{tr.}$, pseudooolitic in part, with chert.	
		10	Shale, as above.	
4795	4800	95	Limestone, as above.	
		5	Shale, as above.	
4800	4805	100	Limestone, as above, pseudoolitic, occasional fossils (brachiopods?). Oil shows 4782-4805, trace to 10% spotty to uniform pale to bright yellow fluorescence, pale to medium yellow cut fluorescence.	
4805	4810	100	Limestone, as above, becoming medium to dark brown and dark brown gray, trace oil shows as above.	
4810	4815	100	Limestone, as above. I-II-III VF-FA + trace B_{1-3}, occasional medium quartz crystals in limestone.	
4815	4820	100	Limestone, as above, mostly brown, III/II VF-FA + trace $B_{tr.-1}$, sandy in part. Oil shows 4810-4820', 10% shows as above with spotty medium brown oil staining.	

DITCH SAMPLES

Examined by Murray Fields 4820 to 4825 — to —

Well I

Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
4820	4825	100	Limestone, as above. I-III VF-FA and III/II VF-FA + trace B_{tr-1}.	
4825	4840	100	Limestone, as above, increasing percentage dark brown gray to brown black limestone, with dark brown to black chert, fossiliferous.	
4840	4845	80	Limestone, as above.	
		20	Siltstone, light gray to gray green, very calcareous.	
4845	4850	65	Limestone, as above, mottled black gray to white, I-II-III VF-FA.	
		35	Siltstone, as above.	
			Oil shows 4820'-4850'; trace shows as above.	
4850	4855	50	Limestone, as above, mostly light tan, 20% pale yellow orange fluorescence, cuts to uniform, pale yellow cut fluorescence.	
		50	Siltstone, as above.	
4855	4860	80	Limestone, light gray, tan brown, I-III VF-FA + trace B_{tr-5}, sandy in part, 10% oil shows as above but medium yellow cut fluorescence.	
		20	Siltstone, as above.	
4860	4865	80	Limestone, as above. I-III VF-FA pervasive silt, 5% shows as above.	
		20	Siltstone, as above.	
4865	4870	80	Limestone, as above, I-III VF-FA + trace B_{tr-5}, 1% shows as above, also trace bright yellow as in 4820'.	
		20	Siltstone, as above.	
4870	4875	60	Limestone, as above I-III VF-FA, 1% shows as above.	
		40	Siltstone, as above.	
4875	4880	60	Limestone, as above. I-III VF-FA + trace B_{tr-5}, mottled green in part, 1% shows as above.	
		40	Siltstone, as above.	
4880	4885	70	Limestone, as above, I-III VF-FA pervasive silt.	
		30	Siltstone, as above.	
4885	4890	65	Limestone, as above, silty in part.	
		35	Siltstone, as above.	
4890	4895	80	Siltstone, as above.	
		20	Limestone, as above.	

DITCH SAMPLES

Examined by Fields 4895 to
Murray to

Well
Field or Area Northern Boundary Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LOGGED
4895	4900	80	Siltstone, as above.
		20	Limestone, as above, very silty, dark gray brown.
4900	4905	90	Siltstone, as above.
		10	Limestone, as above.
			Oil shows 4880'-4910', trace as in 4815'-4880'.
4905	4910	100	Siltstone, as above.

Gas Summary

(Total/Wet) 4600'-4910'

Mud		Cuttings	
4600-4700	0-6/2	4600-4724	0
4700-4730	4/0-14/4	4724-4730	1/1-10/10
4730-4770	10/2-24/6	4730-4740	10/10-64/60 (Max. @ 4738')
4770-4784	6/2-12/4		
4784-4788	60/58-100/98	4740-4750	40/36-62/56
4788-4834	14/10-80/78	4750-4760	20/16-40/38 (Max. @ 4750')
4834-4836	178/176		
4836-4862	26/20-64/64	4760-4770	8/4-20/16
4862-4884	16/14-28/25	4770-4800	4/2-14/6
4884-4910	26/22-40/34 (Max. @ 4908')	4800-4812	2/0-10/6
		4812-4822	30/28-40/40
		4822-4834	12/10-28/24
		4834-4910	6/2-20/16 (Max. @ 4904')

DITCH SAMPLES

Examined by Fields 4910 to 4975
Snyder ___ to ___

Well 1
Field or Area North Boundary, Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LAGGED
4910	4915	75	Siltstone, gray to gray brown, calcareous, argillaceous.
		25	Shale, medium gray to dark gray, calcareous, fossiliferous.
4915	4920	60	Siltstone, as above with fusulinids.
		20	Shale, as above.
		20	Chert, blue, opaque.
4920	4925	80	Siltstone, as above.
		20	Chert, as above.
4925	4930	75	Siltstone, as above.
		20	Limestone, brown, IVFA, very argillaceous.
		5	Chert, as above.
4930	4935	80	Siltstone, as above with fusulinids.
		20	Limestone, as above.
4935	4940	40	Shale, brown to gray brown, silty, calcareous.
		40	Shale, light gray brown, soft, fossiliferous.
		20	Siltstone, as above.
4940	4945	80	Shale, mottled light gray to gray tan, silty, calcareous.
		20	Siltstone, as above.
4945	4955	100	Shale, as above very fossiliferous, with anhydrite.
4955	4960	75	Siltstone, gray to brown and gray green, very calcareous, argillaceous with anhydrite.
		25	Shale, as first above.
4960	4965	80	Siltstone, as above.
		20	Limestone, dark brown, IVFA, argillaceous and silty.
4965	4970	70	Siltstone, as above.
		30	Limestone, as above, dolomitic, with pyrite.
4970	4975	45	Siltstone, as above.
		25	Shale, brown gray green, fossiliferous, calcareous.
		20	Shale, light red, soft.
		10	Limestone, light gray, IVFA with fusulinids.

DITCH SAMPLES

Examined by [illegible] 4975 to 5025
to
Well
Field or Area North Boundary Butte

FROM	TO	%	SAMPLES UNDERLINED — SAMPLES LAGGED
4975	4980	50	Siltstone, as above.
		25	Shale, red, as above.
		25	Limestone as above becoming silty.
4980	4985	60	Siltstone, as above.
		40	Limestone, as above, very silty, with anhydrite.
4985	4990	50	Siltstone, as above.
		50	Limestone, as above.
4990	4995	40	Shale, brown gray, fossiliferous, very calcareous.
		25	Siltstone, as above.
		20	Shale, as above.
		15	Limestone, light gray to light brown, IVFA, with fusulinids.
4995	5000	40	Shale, light red, soft, calcareous with anhydrite.
		20	Shale, gray to gray green, calcareous.
		20	Siltstone, gray to gray brown, calcareous, argillaceous.
		20	Limestone, tan, IVFA, fusulinids.
5000	5005	50	Shale, light red, as above.
		20	Shale, gray to gray green, as above.
		20	Siltstone, as above.
		10	Limestone, as above.
5005	5010	60	Shale, light red, as above.
		20	Shale, gray, as above.
		15	Dolomite, tan, IVFA.
		5	Siltstone, as above.
5010	5015	50	Shale, light red, as above.
		30	Shale, gray, as above.
		20	Dolomite, tan, I/III VF-FA.
5015	5020	70	Dolomite, as above.
		20	Shale, as first above.
		10	Shale, gray, as above.
5020	5025	60	Dolomite, as above, silty.
		20	Shale, gray with anhydrite.
		20	Shale, light red, as above.

DITCH SAMPLES

Examined by Fields 5025 to 5070
Snyder to T.D.

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
5025	5030	40	Dolomite, tan, I-III VFA, silty.	
		30	Anhydrite, white, granular.	
		20	Shale, light red, calcareous, soft.	
		10	Siltstone, gray brown, argillaceous, calcareous.	
5030	5035	50	Shale, mottled red, brown, lavender, purple, calcareous with anhydrite.	
		25	Anhydrite, as above with metallic veins.	
		25	Dolomite, as above.	
5035	5040	50	Anhydrite, as above.	
		30	Shale, as above.	
		20	Siltstone, gray brown, calcareous with anhydrite.	
5040	5045	40	Siltstone, as above.	
		20	Shale, as above.	
		20	Anhydrite, as above.	
		20	Dolomite, tan, IVFA, silty.	
5045	5050	40	Limestone, brown, IVFA, silty.	
		30	Siltstone, gray to brown, with anhydrite.	
		30	Shale, as above.	
5050	5055	60	Shale, as above with anhydrite.	
		20	Limestone, as above.	
		20	Dolomite, IVFA, brown, silty.	
5055	5060	70	Shale, as above, with anhydrite, fossiliferous.	
		30	Dolomite, as above.	
5060	5065	50	Shale, as above, sandy.	
		30	Sandstone, medium orange brown, micaceous, fine-grained, round to sub-rounded, calcareous.	
		20	Dolomite, as above.	
5065	5070	60	Shale, as above, very silty.	
		20	Anhydrite, white, granular.	
		20	Limestone, brown, IVFA.	

DITCH SAMPLES

Examined by Fields 5070 to 5105
Snyder ___ to ___

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
5070	5075	50	Limestone, gray, IVFA, fossiliferous.	
		50	Siltstone, brown, calcareous, argillaceous, with anhydrite.	
5075	5080	50	Siltstone, as above.	
		30	Limestone, as above, dolomitic.	
		20	Shale, gray green, calcareous.	
5080	5085	40	Shale, mottled green, brown, purple.	
		30	Siltstone, as above.	
		30	Limestone, as above, dolomitic, silty.	
5085	5090	100	Limestone, as above, dolomitic, silty.	
5090	5095	40	Limestone, as above, dolomitic, silty.	
		30	Dolomite, brown, IVFA, fossiliferous.	
		30	Siltstone, as above.	
5095	5100	60	Dolomite, as above.	
		40	Limestone, as above.	
5100	5105	50	Dolomite, as above.	
		50	Limestone, as above.	

Gas Summary (Rotary Engineering Units, Total/Methane)

4910-4936 Mud 20/2-60/6 Maximum @ 4910', DST #5, 4787-4910.
4936-4952 Mud: 18/2 Maximum
4952-4960 Mud: 20/6 Maximum
4960-4972 Mud: 10/6 Maximum
4972-5036 Mud: 16/6 Maximum
5036-5088 Mud 12/2 Maximum
5088-5105 Mud: 20/2 Maximum

4910-4936 Cuttings: 6/2-20/4 Maximum @ 4910, DST #5, as above.
4936-5060 Cuttings 6-12/2-4 Maximum @ 4964
5060-5105 Cuttings: 4-6/2

DITCH SAMPLES

Examined by Fields 5105 to 5240
Snyder ___ to ___

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LAGGED
5105	5110	60	Dolomite, brown, I/III VF-FA, silty.
		40	Limestone, light tan. IVFA.
5110	5115	100	Dolomite, tan to tan gray, as above, 2-5% medium yellow fluorescence, pale yellow cut fluorescence, no cut.
5115	5120	100	Dolomite, tan, tan gray to white, as above, 20% shows as above.
5120	5125	100	Dolomite, as above, 5% shows as above.
5125	5130	100	Dolomite, as above, I/III VF-FA + [illegible] B_g, 2% shows as above.
5130	5135	100	Dolomite, as above. I/III VF-FA, 5% shows, as above.
5135	5145	100	Dolomite, as above, 2% shows as above.
5145	5165	100	Dolomite, as above, trace shows, as above.
5165	5170	100	Dolomite, as above, 1% shows, as above, also slight oil staining.
5170	5195	100	Dolomite, as above, 5-10% shows as above.
5195	5200	100	Dolomite, as above, trace shows, as above.
5200	5205	80	Dolomite, as above with anhydrite.
		20	Limestone, white, IIA + tr. B_g. Trace shows as above.
5205	5210	70	Dolomite, as above with chert.
		30	Limestone, as above, no B. 5% bright yellow fluorescence, pale to medium yellow cut fluorescence, no cut.
5210	5215	60	Dolomite, as above.
		40	Limestone, as above, 10% shows as above.
5215	5220	50	Dolomite, as above.
		50	Limestone, as above, 20% shows, as above.
5220	5225	100	Limestone, white, IIA, III VF-MA, 60% shows, as above.
5225	5230	60	Dolomite, tan, I/III VF-MA, 60% shows as above.
		40	Limestone, as above.
5230	5235	50	Dolomite, as above.
		50	Limestone, as above, 40% shows, as above.
5235	5240	70	Limestone, as above.
		30	Dolomite, as above, 30% shows, as above.

DITCH SAMPLES

Examined by Fields 5240' to 5265'
Snyder

Well

Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED — SAMPLES LOGGED
5240	5245	80	Dolomite, as above.
		20	Limestone, as above, 30% shows as above.
5245	5250	50	Dolomite, as above, very silty.
		50	Limestone, as above, 30% shows, as above.
5250	5255	70	Dolomite, tan to light gray, I/III VFA + $2B_5$ + tr. C_1 with anhydrite.
		30	Limestone, as above with III VFA, 20% shows as above.
5255	5260	50	Dolomite, as above.
		50	Limestone, as above with trace B_5, 10% shows, as above.
5260	5265	60	Dolomite, as above.
		40	Limestone, as above IVFA, trace fluorescence as above, no cut fluorescence.

Gas Summary (Rotary Engineering Units, Total/Methane)

Mud		Cuttings	
5105-5138	8-12/2-4	5105-5186	4-8/2
5138-5160	6-8/2	5186-5196	4/2
5160-5166	8-12/2	5196-5214	6-2/0-2
5166-5186	16-24/10-4	5214-5220	20-30/8
5186-5196	16-20/6-8	5220-5230	40-56/0-20
5196-5204	18-20/6-2	5230-5256	18-32, 25 ave./4-8
5204-5228	16-36, 34 ave./12-20	5256-5264	6-12/2-4
5228-5248	20-24/10-12		
5248-5265	8-18/4-8		

Examined by Fields 5265 - [illegible] Snyder to Knight

Well [illegible]
Field or area [illegible]

FROM	TO	%	SHOWS UNDERLINED
5265	5275	70	Limestone, light tan gray, [illegible] VFA, with chert.
		30	Dolomite, tan gray, I/III [illegible], cherty, silty, with anhydrite.
5275	5280	60	Limestone, as above.
		40	Siltstone, medium gray, [illegible], very calcareous.
5280	5285	70	Siltstone, as above.
		30	Limestone, as above.
5285	5290	60	Siltstone, as above.
		20	Limestone, as above.
		20	Shale, medium gray to dark gray, fossilliferous, very calcareous.
5290	5295	60	Limestone, as above.
		40	Siltstone, as above.
5295	5300	75	Limestone, as above.
		25	Siltstone, as above.
5300	5320	100	Limestone, as above with anhydrite and disseminated chert.
5320	5330	70	Limestone, light brown, I-III VF-FA, anhydritic, [illegible]
		30	Shale, red, calcareous, silty.
5330	5335	60	Limestone, light brown, as above.
		20	Limestone, light gray, III FA.
		20	Shale, ochre, gray-green.
5335	5340	80	Limestone, light brown, I/III VF-FA.
		20	Shale, green with white anhydrite inclusions.
5340	5345	100	Limestone, light brown, IVFA with crystalline anhydrite inclusions, also orange chert fragments.
5345	5375	100	Limestone, tan to light brown, III/I VF-FA with anhydrite, as above.
5375	5380	80	Limestone, as above becoming II A with chert fragments.
		20	Shale, medium gray, soft, mushy.
5380	5385	70	Limestone, as above with rare light yellow chert fragments.
		30	Shale, gray, red, purple, as above.

DITCH SAMPLES

Examined by Knight 5385 to 5530 Well [illegible]
Snyder to Field or Area [illegible]

FROM	TO	%	SHOWS UNDERLINED SAMPLES [illegible]
5385	5390	60	Limestone, as above with white chert fragments (10%).
		40	Shale, gray, red and purple, soft, mushy.
5390	5395	100	Limestone, tan, III/VF-FA with small forams and abundant [illegible] fragments.
5395	5400	100	Limestone, tan, IVFA, sandy.
		Tr.	Limestone, tan, [illegible]. 5-10% medium yellow fluorescence, pale yellow [illegible] fluorescence, no cut.
5400	5405	100	Limestone, tan to white, I/III [illegible] with orange chert fragments. 5-10% shows as above.
5405	5410	100	Dolomite, white, III[illegible]-LA + tr. [illegible]. 5-10% shows as above.
5410	5420	100	Sandstone, fine, sub-rounded, well sorted, calcareous, few grains show [illegible] stain. 20% shows as above.
5420	5425	80	Sandstone, white to light gray, very fine, angular to sub-rounded, siliceous. Trace shows as above.
		20	Shale, purple, red and green.
5425	5430	80	Sandstone, as above. 2% shows as above.
		20	Shale, as above.
5430	5435	70	Sandstone, as above, 2% shows as above.
		30	Shale, purple, red and green.
5435	5440	70	Limestone, medium brown, [illegible]. 2% shows as above.
		30	Shale, red, green and purple.
5440	5445	100	Shale, brown, silty, very calcareous. Trace shows as above.
5445	5455	100	Shale, purple, red, brown, ochre, silty, calcareous.
5455	5460	100	Shale, brown, red, silty, calcareous.
5460	5465	40	Limestone, brown, III FA.
		30	Sandstone, white, coarse.
		30	Shale, as above.
5465	5500	100	Limestone, medium brown, III [illegible] with abundant [illegible].
5500	5530	90	Limestone, light brown, I/III [illegible] with organic [illegible] and [illegible].
		10	Chert, light gray brown.

DITCH SAMPLES

Examined by Knight 5530 to 5650
Snyder ___ to ___

Field or Area: [illegible]

FROM	TO	%	SHOWS UNDERLINED	SAMPLE CARDS
5530	5535	80	Limestone, as above.	
		10	Chert, as above.	
		10	Limestone, light brown, III FA + tr. C_{20}, oolitic.	
5535	5540	100	Limestone, tan, III VF-FA.	
5540	5550	50	Limestone, as above.	
		50	Limestone, pale gray to white, II/III VF-FA.	
			NOTE: Above samples contain abundant gray green and red shale + cavings.	
			Gas Summary Mud: 5265'-5550', 16-90 units total gas, 2-8 units methane. Cuttings: 5265'-5550', 6-34 units total gas, 1-4 units methane.	
5550	5575	100	Limestone, white to tan, IVF-FA, with fusulinid fragments at 5570'.	
5575	5580	100	Limestone, white to tan, I-III F-MA + some II.	
5580	5585	60	Limestone, white to tan, I-III VF-FA.	
		40	Shale, purple, flaky, few fragments white chert.	
5585	5590	100	Shale, as above, very poor sample.	
5590	5595	60	Shale, green and purple, soft, flaky.	
		40	Limestone, as above.	
5595	5600	50	Shale, purple, as above.	
		50	Limestone, as above.	
5600	5625		Very poor samples. Possibly 50-50 Limestone, white, as above, and shale, purple, green, flaky.	
5625	5640	80	Shale, purple, flaky and green.	
		20	Limestone, white, III FA.	
5640	5645	40	Chert, bright orange and white.	
		30	Limestone, white, mottled brown, I/III VF-FA with some purple shale [illegible]	
		30	Shale, purple and pale green, soft, flaky.	
5645	5650	40	Shale, purple, flaky.	
		30	Limestone, tan, III VFA.	
		30	Chert, as above, with purple shale inclusions.	

DITCH SAMPLES

Examined by Knight & Snyder 5650 to 5780 to

Well 1
Field or Area North Boundary Butte

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED

Gas Summary
Mud: 5550'-5975', 4-22 units total gas, 2-[illegible] units methane.
Cuttings: 5550'-5975', 0-4 units total gas, 0-3 units methane.

5650	5660	50	Limestone, tan, III VFA, with fusulinid fragments
		30	Shale, purple, as above.
		20	Chert, as above.
5660	5665	50	Limestone, as above.
		50	Shale, purple and green with fragments orange chert.
5665	5675	80	Shale, purple, red, green, silty calcareous.
		20	Limestone, brown, III FA.
5675	5685	100	Limestone, tan, IVFA with large oolites showing orange staining.
5685	5715	100	Limestone, cream, IVF-MA with large oolites.
5715	5725	100	Limestone, tan, I-III VF-FA.
5725	5735	50	Limestone, as above, oolitic with red shale partings.
		50	Shale, red, very silty, calcareous.
5735	5740	100	Limestone, white, III FA.
5740	5755	100	Limestone, white, III-II VF-FA.
5755	5760	90	Limestone, as above, predominately II A.
		10	Limestone, white, I LA.
5760	5765	70	Limestone, white, III-II VF-FA, predominately II A.
		30	Limestone, white, I LA.
5765	5770	50	Limestone, white, III-II VF-MA predominately II A.
		30	Limestone, light yellow, III F-MA.
		20	Limestone, white, I LA.
5770	5780	40	Limestone, white, II A.
		30	Limestone, white, IVF-MA, pseudo-oolitic.
		30	Limestone, yellow, III F-MA.

DITCH SAMPLES

Examined by Knight 5780 to 5900
Snyder ___ to ___
Fredkin

Well [redacted]
Field or Area [redacted]

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
5780	5785	80	Limestone, white, I-LA.	
		20	Limestone, white, II A.	
5785	5795	100	Limestone, white, II A.	
5795	5800	50	Limestone, white, II A.	
		50	Limestone, white to light gray, IVFA.	
5800	5805	100	Limestone, white, III/IF-MA.	
5805	5810	100	Limestone, as above, III/IF-MA.	
5810	5815	100	Limestone, white, III/IF-MA.	
5815	5820	60	Limestone, as above.	
		40	Limestone, cream, IVFA, pseudooolitic with thin green shale partings.	
5820	5825	80	Limestone, cream, III-IF-MA.	
		20	Limestone, light gray, I-III FA.	
5825	5830	100	Limestone, as above.	
5830	5835	70	Limestone, cream, III FA. Tentative Top Ouray 5830.	
		30	Dolomite, light brown, III FA + trace B and C.	
5835	5840	100	Dolomite, tan, III FA + 5 B + tr. C_1 and very fine channels.	
5840	5845	100	Dolomite, as above + 30 B-10 + tr. C_{1-5}.	
5845	5855	100	Dolomite, as above + 5 B-10 + tr. C_{1-5} + very fine channels.	
5855	5860	100	Dolomite, medium brown, III-MA.	
5860	5865	50	Limestone, white, III MA.	
		50	Dolomite, as above.	
5865	5870	60	Dolomite, as above, but with no pohosity.	
		40	Limestone, white, III MA.	
5870	5885	100	Dolomite, light brown, III-MA.	
5885	5890	100	Dolomite, medium brown, III-MA, calcareous.	
5890	5895	100	Dolomite, as above, very calcareous.	
5895	5900	60	Limestone, white, III MA.	
		40	Dolomite, as above.	

DITCH SAMPLES

Examined by [illegible] / Snyder 5900 to 5975 (T.D.) to

Well [illegible]

Field or Area North Boundary [illegible]

FROM	TO	%	SHOWS UNDERLINED	SAMPLES LAGGED
5900	5905	50	Limestone, as above.	
		50	Dolomite, as above.	
5905	5910	80	Limestone, white, I-III M-LA.	
		20	Dolomite, as above.	
5910	5915	100	Limestone, as above.	
5915	5920	100	Limestone, white, IVF-LA with abundant large oolites.	
5920	5925	100	Limestone, white, I-III F-MA with dolomitic rhombs.	
5925	5930	100	Dolomite, white to light brown, III [illegible] + [illegible] + $1C_1$.	
5930	5940	100	Dolomite, light to medium brown, III [illegible] + 10B[illegible] + $1C_1$.	
5940	5945	100	Dolomite, medium brown, III MA + $20B_5$ + $1C_1$.	
5945	5950	100	Dolomite, medium brown, III MA + $10B_5$ + trace C_{1-5}.	
5950	5960	100	Dolomite, light brown to tan, III F-MA.	
5960	5965	100	Dolomite, light gray, III FA with scarce gray shale partings.	
5965	5970	80	Dolomite, as above.	
		20	Shale, medium gray, calcareous, silty.	
5970	5975	70	Dolomite, as above.	
		30	Shale, as above.	
			T.D. 5975'.	

[illegible] OIL COMPANY

CORE RECORD

WEEK ENDING

CORE FROM TO

CORES EXAMINED BY H. Knight

AREA OR FIELD North Boundary Butte

COMPANY Shell Oil Company

LEASE AND WELL NO. North Boundary Butte No. 1

NO.	FROM (Depth)	TO	RECOVERED	FORMATIONAL, STRUCTURAL AND PROBABLE PRODUCTIVITY DESCRIPTION OF CORE	SYMBOL	OBSERVED DIP	CORE INDICATION OIL-GAS / CONDITION
				SCHLUMBERGER SIDEWALL SAMPLES			
1	5160			No recovery.			
2	4745			Limestone, light tan, III-II VF-FA, fossiliferous, 20% pale yellow spotty fluorescence , pale yellow cut fluorescence. No cut.			
3	4735			Limestone, tan, III F-LA with rare oil stained fractures 20% fluorescence as above, pale to moderate cut fluorescence			
4	4730			Limestone, Tan, III F-LA, with 10% B vugs showing dead brown oil residue, strong uniform bright yellow fluorescence, very strong bright cut fluorescence, pale brown cut. Sample appeared to be fragmental.			

SYMBOLS: 0-CLAY OR SHALE (SAND 0-5%), 1-CLAY OR SHALE WITH SAND STREAKS (SAND 5-30%), 2-CLAY OR SHALE AND SAND (SAND 30-60%), 3-SAND WITH SHALE STREAKS (SAND 60-95%), 5-SAND (95-100%) [illegible]

PD 4A A 50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING 11-17-58

North Boundary
WELL NO. Butte 1

AKAH
(FIELD)

SAN JUAN UTAH
(COUNTY)

33
(SECTION OR LEASE)

T42S R22E
(TOWNSHIP OR RANGE)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
	5975	TD	Recompletion
9-22	4780	PBTD	Rigged up completion rig. Killed well and circulated water. Pulled 2" tubing, packer and Otis side-door eqpt. Ran Baker Model K cast-iron bridge plug set at 4780'. Laid down 2" tubing. Ran 2-1/2" EUE tubing to 4777', perfs 4742-46', seating nipple 4741'. Ran rods and pump. Released rig 9-16-58. Poured pulling unit foundation. Set pit. Installing sheave on engine.
9-23			Rigged up sheave on engine. Pumping on gasoline fuel until casing gas available. No gauge.
9-24			Pumping. No gauge.
9-25			24 hours pump[illegible] and flowed 711 bbls. gross, 447 oil, 37.2% cut (partially load water). Pumping.
9-26			368 B/D gross, 198 B/D oil, cut 46.2%, in 24 hours. Pumping.
9-27			80 bbl[illegible] gross in 24 hours, 46% cut, 97 bbls. oil.
9-28			[illegible] bbls. gross in 10 hours. Shut down to clean oil in tanks.
9-29			[illegible] to dehydrate oil in tanks.
9-30			[illegible] flowed 3 hours. Made 136 bbls. gross, 119 oil, 19% cut.
10-1			Hauling out tanks.
10-2			Heating and circulating oil in lease tanks to reduce cut [illegible] oil.
10-3			Shut in. One tank shipping.
10-4			Pumped 6 hours. Made 103 bbls. gross, 73 bbls. oil, 29% cut (292 B/D gross rate, 292 B/D oil rate, 29% cut).
10-5			Pumping. No gauge.
10-6			Pumped and flowed 24 hours. Made 925 bbls gross, [illegible] bbls oil, 54% cut.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET

DRILL PIPE SIZES

B. W. SHEPARD
SIGNED

FO 4 [illegible] PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING 11-17-58

North Boundary 34
WELL NO. Butte 1
33 (SECTION OR LEASE)
T42S R22E (TOWNSHIP OR RANCHO)

Aneth (FIELD)
San Juan Utah (COUNTY)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
10-7	5975	TD	Pumped and flowed 12[illegible] B/D gross, 63[illegible] B/D oil, 48% cut in 24 hours.
10-8	4150	PBTD	Shut in for storage.
10-9			Pumped and flowed 24 hours. Produced 497 bbls. oil. Not cut. Water meter broke. Repairing.
10-10			Pumped 24 hours. Made 767 B/D gross, 467 B/D oil, 39.1% cut.
10-11			Pumped 24 hours. Made 595 B/D gross, 470 B/D oil, 36.9% cut.
10-12			Pumped 24 hours. Test data delayed 1 day.
10-13			Pumped and flowed 24 hours. Made 437 B/D oil. No gross production or cut. Water meter broke on heater. Repairing.
10-14			Pumped and flowed 24 hours. Made 450 bbls. oil. Not cut.
10-15			Pumped and flowed 24 hours. Made 421 bbls. oil, no cut.
10-16			Pumped and flowed 24 hours. Made 281 bbls. oil. Not cut.
10-17			Pumped 3[illegible] bbls. oil, not cut, in 24 hours.
10-18			Pumped 24 hours. Made 245 bbls. oil, not cut.
10-19			Pumped 24 hours. oil, not cut.
11-17			Recompleted 10-4-58. Pumping 6 hours, 73 bbls. gross (290 B/D rate) cut 1.[illegible] Representative Initial Production: 344 B/D gross, 275 B/D pump clean, cut 20%, No Gas Measurement.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
1-¼	0	1025	9⅝"	1012'
7⅞"	[illegible]	5975	5½	5475'

DRILL PIPE SIZES

B. W. SHEPARD
SIGNED

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SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING March 23, 1955

North Boundary Butte (FIELD) | San Juan (COUNTY) | WELL NO. 3 (DESIGNATION OF WELL) | T.42 S., R. 22 E., SLM (TOWNSHIP OR SURVEY)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
3/21		5320 B.P.	Killed well. Removed Xmas tree and rigged up B.O.P. Unseated packer and pulled out of hole. Removed plug at Otis sub consisting of balled friction tape, packer sand and tar. Ran tubing back in hole with bull nosed perforated tail at 5282', perforations 5278'-5282', Lane Wells packer at 4781', Otis side door sub at 4751'. Removed BOP, landed tubing on donut, installed Xmas tree, and rigged up lubricator to swab. Started swabbing at 1:30 PM. Made 13 swab runs, well started flowing at 6:30 pm. Blew well alternately from casing and tubing until both casing and tubing line cuts fell below 25%. Ran in with wire line Otis side door mandrell (B & R service) at 11:15 pm. Started blowing upper zone.
3/22			Blew upper zone, 4688'-4750', alternately through casing and tubing until each cut dropped below 20%. Rates for upper zone: 624 B/D through casing, 336 B/D through tubing. Casing flowing pressure, 400 psi. Shut in upper zone at 3:30 AM, removed side door mandrell and ran in straight through mandrell. Started blowing lower zone, 5108'-5282', through tubing at 5:30 AM. Released drilling contractor at 8:30 AM. Initial cut was 92% declining to 25% at 11:30 AM, then rising sharply to 85% by 1:45 PM staying near that level until 5:30 PM with cuts gradually decreasing into the next day. Salinities during the whole period increased from 25,000 ppm to 40,000 ppm, separator pressure steady at 48 psi, recovery very erratic settling at 108 B/D rate.
3/23			Continued blowing lower zone. Drilling contractor put on standby at 8:00 AM, released at 8:20 AM. Cut dropped from 22% at 6 AM to 19% at 4 PM. Recovery, salinity and separator pressure (1" surface bean) were constant at 110 B/D rate, 44,500 p.p.m. and 48 psi respectively. Well shut in at 4:15 PM.

George Noland Drilling Company
Drillers: H. E. Clements
T. T. Glazebrbok
E. B. Lewis

CONDITION AT BEGINNING OF PERIOD				
HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023'	9 5/8"	1012'
7 7/8"	1023'	5975'	5 1/2"	5475'
DRILL PIPE SIZE				

David M. Chadkin

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SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING 3-20-55

WELL NO. 1

North Boundary Butte (FIELD)
San Juan, Utah (COUNTY)

33 (SECTION OR LEASE)
T. 42 S., R. 22 E., SLM (TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
3/14		5450 PBTD - Bridge Plug at 5320	Coming out of hole with unfired McCullough gun, jet strip hung up at 3716', and the 62' jet strip was lost in the hole. Went in with McCullough wire line spear, could not pull fish. Went in with bit in attempt to push fish to bottom, no success. Went in hole with tubing and rope spear and fished, no success. Pulled out of hole and went in with 4 3/4" bit to drill up fish. Drilled on fish and pushed to bottom (5316+). Pulled out of hole. Ran Baker wire line junk basket (McCullough) and retrieved glass fragments. Perforated, (McCullough) with 4 jets/ft. the intervals 4688-4696, 4708-4714, and 4728-4750.
3/15		5450 PBTD 5320 B.P.	Ran in with Johnston straddle test tool for production test #3, top packers at 4660 and 4665, bottom packer at 4764, tubing perforations 4729'-4764', two outside pressure recorders below bottom packer, two between packers, 1/2" subsurface bean. Dropped bar at 5:00 A.M. -- blew non-inflammable gas 2 1/2 hours. Rigged up and made 4 swab runs in 3 hours, 30 minutes, recovering 1 bbl. of mixed fluid on first run and nothing thereafter. Waited on acidizers, 3 hours. Acid treatment (Dowell), interval 4688-4750. Began displacing 1000 gal acid (15%, XF-32) into formation at 12:20 P.M. Maximum pressure on tubing, 4200 psi, casing 4000 psi. Blew gasket on B.J.P. after displacing 2 bbl into formation in 13 minutes. Resumed acid treatment after 40 minutes, holding 2500 psi back pressure on casing. Maximum treating pressure, 2nd attempt, 3700 psi. Loaded water underflush, 10 minutes. Underflushed acid with 12 bbl. water, rate 3 bbl/minute, 5 minutes. Water went away at vacuum. Total treatment time, 1 hour, 15 minutes. Made 1 swab run immediately after treatment, found fluid level at 1200+, swabbed from 200' off bottom, recovering 12 barrels of oily acid water. Well blew in at 2:10 P.M. By 4:00 P.M. well was flowing at a rate of 744 B/D gross, 632 B/D oil, cut 15%, salinity 47,000 ppm (NaCl (t)), gas rate 1500 MCF/D through 2" open tubing with 1/2" bottom hole restriction, strong H_2S odor. TP 190 psig.
3/16		5320 Bridge Plug	Continued production test #3. At 2:00 A.M. rate had fallen to 372 B/D gross, 327 B/D oil, cut 12%, 35,000 ppm salinity, 165 psig through 5/8" choke. Production test continued into the next day with recovery rate gradually declining.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023'	9 5/8"	1010
7 7/8"	1023	5975'	5 1/2"	5475

DRILL PIPE SIZES

David M. Fradkin

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SHELL OIL COMPANY

WELL NO. 1

DRILLING REPORT

FOR PERIOD ENDING 3-20-56

North Boundary Butte (FIELD)

San Juan, Utah (COUNTY)

33 (SECTION OR LEASE)

T. 42 S., R. 22 E., SLM (TOWNSHIP OR RANGE)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
3/17		5320	Killed well at 12:15 A.M. During the total flowing time of 3¼ hours, 5 minutes, well produced 494 bbls. gross, 429 bbls. oil, gravity 40.5° API dry, 65 bbl. water. Final rate (unstabilized) was 216 B/D gross, 190 B/D oil, cut 12%. Salinity 33,300 ppm, 1120 MCF/D (stabilized) of sour gas at 170 psi, through a 5/8" bean. Killed well and unseated packer, 1 1/4 hours. Came out of hole, 2 hours. Broke down and loaded Johnston straddle tool two hours. From pressure recorder below bottom packer, IHP 1980#, FHP 1610#, no leak: between packers, IHP 2040, IFP (before acidizing) 0, acid squeeze, 4740#, IFP (after acidizing and swabbing) 1515#, FFP 1515#. Unloaded and made up Halliburton straddle test tool, 1 hour. Ran in hole with tubing and tool, 2 1/2 hours. Packers at 4658, 4765, tubing perf. at 4758-4765, no subsurface bean. Rigged up to acidize and started acidizing (Dowell) at 9:20 A.M. interval 4688-4750. Injected 250 gal. of fix-a-frac followed by 42 gal. of water at a maximum pressure of 850 psi, 3 bbl/min., followed by 500 gal. of acid (XF-32), maximum pressure 2000 psi, breaking to 1500 psi in 3 minutes, dropping gradually to 1300 psi during the injection of 1000 gal acid X500, followed by an overflush of 1000 gal acid (XF-32). Rates of injection were 4-4.6 bbl/min. Underflushed with 735 gal. of water at a pressure of 1500 psi, 4 bbl/min. Last portion of water went away at a vacuum. Total treatment time, 50 minutes. Swabbed for 3 hours, making 6 swab runs recovering 40 bbl. Well began to flow on 6th swab run at 12:55 P.M. (Production test #3A). Rate first 4 hours 1100 B/D gross, 660 B/D oil, cut 37%, salinity 25,000 ppm (NaCl (t)), 2500 MCF/D gas, gas pressure of 215 psi through a 5/8" bean. Production test continued into the next day with declining rates and increasing pressures.
3/18		5320 B.P.	Killed well at 1:00 P.M. During the total flowing time of 24 hours, 45 minutes, well produced a total of 709 bbl gross, 443 bbl of 41.5° API oil, 166 bbl of water. Final rate (not stabilized) 312 B/D gross, 262 B/D oil, cut 16% salinity 25,000 ppm, 1700 MCF/D at a pressure of 230 psi through a 1" bean. Strong H_2S odor. Killed well with water. Pulled out of hole, 2 hours. Removed Hydril, 2 hours. Ran in hole with tubing and Otis side door choke, 2 hours. Tail at 5282', Lane Wells BOGI type 5 1/2" production packer at 4781', Otis side door sub (Model 1-AO) at 4751'. (Side door mandrell, 2-PAL; straight through Mandrell 10-P05.) Removed BOP, 1 hour. Landed tubing on donut, install Xmas tree and nipples up, 4 hours.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET

DRILL PIPE SIZES

David M. Fradkin

SIGNED

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SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING 3-20-55

North Boundary Butte (FIELD)

San Juan, Utah (COUNTY)

WELL NO. 1

33 (SECTION OR LEASE)

T. 42, R. 22E., SLM (TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
3/19		5320 B.P.	Finished nippling up. Made 5 swab runs (side door mandrel in hole) and well began flowing at 5:00 A.M. Blew upper zone through tubing until 12:30 P.M. with final tubing cut of 20%. Blew upper zone (46[illegible]-4750) through casing until 3:50 P.M. with final cut of 20%, salinity 28,000 ppm (NaCl (t)). Final production rate through casing of 564 B/D gross, 435 B/D oil, cut 23%, 9500 MCF/D gas, gas pressure of 450 psi through 1" bean. Pulled side door mandrel (initially stuck) and installed straight through mandrell (B & R service), three hours, shut in pressure on casing, 1100# in 15 minutes. Swabbed the lower zone (5108-5282) 6 times recovering 2 1/2 bbl. of fluid on first run and nothing thereafter. Tried rocking lower zone with casing gas, no success.
3/20		5320 B.P.	Made 6 more swab runs (total 12) recovering no fluid. Tried rocking lower zone with casing gas, again no success in unplugging. Left casing gas (pressure 1100 psi) on plug at choke for an hour and released, no success. Blew upper zone and tried to siphon up plug, no success. Pulled straight through mandrel (B & R service), noted balled friction tape in mandrell. Blew upper zone and unsuccessfully tried to siphon up plug, after lowering sinker bar and locating plug at base of Otis sub. Lowered sucker rod on sand line and unsuccessfully attempted to break up plug, 2 hours. Nippled up to kill well and pull tubing.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET

DRILL PIPE SIZES

Contractor: George Noland Drilling Co.

Drillers: T. T. Glazebrook

H. E. Clements

E. B. Leake

David M. Fradkin

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SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING March 13, 1965

North Boundary Butte 1 (FIELD)
San Juan, Utah (COUNTY)

Section 31
T. 42 S., R. 22 E., SLM

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
3/7		5975 T. D.	Finished running Schlumberger E. S., micro-log and sectional gamma, laterolog, gamma ray-neutron and dipmeter logs. Ran seismic velocity survey. Took 4 Schlumberger sidewall samples. Laid down drill collars, core barrel and part of drill pipe.
3/8		5975 T. D.	Ran in with open end drill pipe, Cemented (Halliburton) through open end drill pipe hung at 5925'. Pumped 10 barrels H2O ahead and 3 barrels behind. Used 100 sacks of Ideal Construction cement, 115 pound slurry. Displaced with 78 barrels of mud. Ran in with 7 7/8" bit to 5500, circulated 1½ hours. Came out of hole and laid down drill pipe. Ran 129 joints of 5½", 17 pound, J55 spang, 8 round thread, L. T. & C. casing with two scratchers to depth of 5475'. Cemented casing (Halliburton) with 250 sacks of Ideal Portland cement, 115 pound slurry, fast 100 sacks treated. Pumped 20 barrels H2O ahead, displaced with 127 barrels mud and water. Bumped top and bottom rubber plugs. Started at 5:00 P. M., finished at 6:15 P. M. Waited on cement 5 3/4 hours.
3/9		5975 plug 5450	Picked up 3" Kelley and ran 175 joints of 2 3/8", upset, 4.7#, 10D thread, J seam, E. S. S. tubing with 4 3/4" bit. W. O. C. 10 hours. Changed rams and displaced mud with water. Drilled plug, baffle plate (5438') and cement to 5450'. W. S. O. #1 Johnston Shoot-N-Test tool. Shot 4, type 25A ½" jets at 5445', ¾" subsurface bean, packer at 5419', tail to 5445', 4' air cushion. Dropped bar at 7:25 P. M. Tool open, 1 hour. Blow fair decreasing to weak in 5 minutes, dead in a total of 8 minutes. No fluid loss in annulus. Recovered 215' of slightly muddy water, maximum 825 ppm NaCL(T), 8.7 #/gallon. Water in pits, 800 ppm, 8.6 #/gallon. IFP, 0; FFP, 0, HP 2415.
3/10		5975 plug 5450	WSO #2. Johnston Shoot-N-Test. Shot 4 type 26A, ½" jets at 4622', ¾" subsurface bean, packers at 4632' and 4607', 4' of air cushion, 2 outside pressure recorders between packers, 2 pressure recorders below bottom packer. Dropped bar at 2:03 A. M. Very strong blow and rapid fluid loss in annulus. Leaky top packer. W. S. O. #2. 4 jet holes at 4622'. Johnston conventional straddle tool with packers at 4612' and 4637', ¾" subsurface bean, 10' of air cushion, 2 pressure recorders between packers, 2 pressure recorders below bottom packer. Dropped bar at 7:11 A. M. Tool open 1 hour 10 minutes. Blow fair decreasing to dead in 4 minutes. Recovered 15' (.06 barrels) of water, salinity nil, 8.7 #/gallon, IFP, 0; FFP, 0; SIP, 0, HP, 2070. Pulled and laid down test tools. Spliced line, ½ hour. Ran McCullough neutron log and collar locator. Perforated (McCullough) intervals 5430-5427, 5420-5390, 5386-5380 with 2 jets and 2 bullets per foot.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12¼"	0	1023'		
7 7/8"	1023'	5975	9 5/8"	1012'
DRILL PIPE SIZE	4½",	16.6 #		

David M. Fradkin

PD 4A 2-50 PRINTED IN U. S. A.

SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING

North Boundary Butte (FIELD)

San Juan, Utah (COUNTY)

March 13, 1955

Section 3[illegible]

T. 42, R. 22 [illegible]

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
3/11		5975 plug 5450	Production Test #1, intervals 5430-5427, 5420-5390, 538[illegible]-537[illegible]. [illegible] in tubing with Johnston disc, set at 5357, tail to 5421½, tubing perforations 5417-5421½. Dropped bar at 5:14 A. M., no blow. Dropped second bar at 5:25 A. M. No blow. Noted about 75' [illegible] in annulus. Unseated packer at 5:43 A. M. Immediate strong [illegible]. Reseated packer at 5:45 A. M. Blow dead at 5:47 A. M. [illegible] lubricator and prepared to swab, ran swab to 5421', [illegible] socket. Pulled tubing. Recovered swab. Ran 2" tubing, set Halliburton HM packer at 5354', tail to 5420½', tubing perf[illegible] 5416-5420½'. Acidized the interval 5374-5430. Started to [illegible] (Dowell) 12 noon. Injected 504 gallons 15% acid (XF-32), 3000 psi maximum pressure, broke to 750 psi; followed by 924 gallons [illegible] maximum pressure 3500 psi, minimum and final pressure 3000 psi, average rate of injection 37 gallon per minute; followed by [illegible] 15% acid (XF 32), initial pressure 3000 psi, maximum pressure 3000 [illegible] displaced with water, maximum pressure 2900 psi, final pressure [illegible] Final rate 2.7 barrels per minute. Total time acid in formation 2 hours. Rigged up to swab. Started swabbing at 3:00 P. M. Made 7 swab runs, recovered 30¼ barrels of spent acid and water, [illegible] 146,000 ppm NaCL (T) decreasing to 100,000 ppm (T). Well began flowing gas at 7:20 P. M., gas burned with orange color, with water vapor of 100,000 ppm.
3/12		5975 plug 5450	Gas continued to blow, reaching a pressure of 30 psi through a 5/[illegible] at 2:30 A. M., calculated rate of 400 MCF/D, and stabilized at that point for 2 hours. Water vapor was produced at a rate of 40 [illegible] per day, 100,000 ppm NaCl (T) salinity, 2-3% oil (1 barrel per [illegible]) T. P. 300 psi. H_2S detector gave a zero reading. Well was killed at 4:30 A. M. Pulled tubing and packer. Set model N Baker [illegible] bridge plug on wire line at 5320'. Perforated (McCullough) with [illegible] jets per foot interval 5282-5274, 5266-5208, 5184-5108. Ran in tubing with Halliburton HM packer at 5088', tubing perforations to 5275-5276½, tail at 5276½. Rigged up to acidize. Started to acidize (Dowell) at 6:17 P. M. Injected 500 gallons 15% acid (XF-32), [illegible] psi, maximum pressure broke to 4400 psi, breaking again to 3500 [illegible] 10 minutes. Followed with 3000 gallons Jel X500, maximum pressure 4700 psi, minimum and final pressure 2500 psi, average rate of injection 97 gallons per minute. Followed with 3000 gallons 15% [illegible] (XF-32), initial pressure 3600 psi, maximum pressure 3600, displaced with 966 gallons water maximum and final pressure 1950 psi, [illegible] 2.5 barrels per minute. Total time [illegible] formation 2 hours, 30 minutes. Started swabbing at 8:50 P. M. Made [illegible] swab [illegible] recovering 15 barrels water and spent [illegible]. Well began to flow at 10:00 P. M., at [illegible] initial rate of 27½ barrels per day, [illegible] 41%, salinity 177,000 ppm NaCl (T).

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET

DRILL PIPE SIZES

D. M. Fradkin

L. Snyder

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SHELL OIL COMPANY

DRILLING REPORT
FOR PERIOD ENDING

March 13, 1955

WELL NO. 1

North Boundary Butte
(FIELD)

San Juan, Utah
(COUNTY)

Section 33
(SECTION OR LEASE)

T. 42 S., R. 22 E., SLM
(TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
3/13		5975 Bridge plug 5320	After flowing a total of 20 hours, rate stabilized the last 4 hours at 210 barrels per day, cut 6%, salinity 150,000 ppm NaCl (T), 480 MCF/D through a 5/8" choke (40 psig pressure), separator pressure of 100 psi. Well produced a total of 45 barrels water and 233 barrels of 38° API (dry) gravity oil. Killed well with water at 6:00 A. M. Pulled tubing, dragging packer. Rigged up to perforate (McCullough). Ran in to perforate with jet strips, gun did not fire. Began to pull gun. George Noland Drilling Company Drillers: T. T. Glazebrook H. E. Clements E. B. Lewis

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET

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SHELL OIL COMPANY

DRILLING REPORT

FOR PERIOD ENDING March 6, 1955

North Boundary Butte (FIELD)

San Juan, Utah (COUNTY)

WELL NO. 1

Section 13 (SECTION OR LEASE)

T.42S., R.22E., S.L.M. (TOWNSHIP OR RANCHO)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/28	5463'	5542'	Drilled 79'. Treated mud with starch, preservative, gypsum and salt gel.
3/1	5542'	5637'	Drilled 95'. Treated mud with starch, gypsum and preservative.
3/2	5637'	5683'	Drilled 46'. Changed drilling line, 3 hours. Treated mud with salt gel, starch, gypsum and preservative.
3/3	5683'	5781'	Drilled 98'. Treated mud with gypsum, starch, salt gel and preservative.
3/4	5781'	5872'	Drilled 91'. Circulated up samples 2 1/2 hours. Treated mud with salt gel, starch, gypsum and preservative.
3/5	5872'	5930'	Drilled 58'. Circulated for test, 4 hours. Made up test tool, 1 1/2 hours.

DST #8, 5807'-5930', Johnston testers. Ran tester with dual 6 1/2" rat-tail packers at 5802' and 5807', 3 outside pressure recorders, 3/4" sub-surface bean, perforations 5807'-5825' and 5913'-5930', 30 foot air cushion. Tool open 2 hours, 25 minutes, shut in 1 hour, 15 minutes. Strong blow decreasing to good in 5 minutes, steadily increasing to very strong at end of test. No fluid loss in annulus. Recovered 1220' (14.1 bbls) fluid including 350' (4.7 bbls) GWM, 270' (3.6 bbls.) GMW, and 600' (5.8 bbls) black sulphur water.

Feet Above Tester	Description	Salinity (t) NaCl	Gas T/M (Rot. Eng.)	Wt. #/gal
1140	Gas cut mud		Neg. reading	9.6
1050	Gassy watery mud		4/0	9.0
780	Gassy muddy water	52,000	Neg. reading	9.0
420	Bk. sulphur water	72,000		8.8
90	No fluid, heading cleaned stand of pipe			
30	Bk. sulphur water	73,000		8.8
0	Bk. sulphur water	73,000		8.8

ISIP 2100, IFP 135, FFP 525, SIP 1965, nearly stabilized 40 minutes, HP 3030. Mud before test 9.7#/gal., 11/3 (T/M) gas, 150 ppm.

Treated mud with gypsum, starch and preservative.

DAY	FROM	TO	REMARKS
3/6	5930'	5975' T.D.	Drilled 45'. Broke down and loaded Johnston test tool, 1 1/2 hours. Ran in with new bit, 2 hours. Circulated 1 1/2 hours. Came out of hole, 1 1/2 hour. Rigged up for Schlumberger 1/2 hour. Started running logs.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12 1/4"	0	1023'	9 5/8"	1012'
7 7/8"	1023'	5463'		

DRILL PIPE SIZES 4 1/2", 16.6#

Mud Summary
Weight 9.8#/gal.
Viscosity: 48-54 sec.

Contractor: Geo. Noland Drilling Co.
Drillers: T. T. Glazebrook
H. E. Clements
E. B. Lewis

David M. Fradkin

North Boundary Butte
(FIELD)
San Juan, Utah
(COUNTY)

DRILLING REPORT
FOR PERIOD ENDING

February 27, 1955

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/ 25	5297	5377	Drilled 80'. Treated mud with gypsum, preservative, starch and salt gel.
2/26	5377	5438	Drilled 61'. Circulated up samples, 1 hour. Treated with gypsum, preservative, starch and salt gel.
2/27	5438	5463	Drilled 25'. Circulated for DST # 7, 1 hour.

DST # 7, 5307-5447', Johnston testers. Ran tester with dual Bobtail 6½" packers at 5302' and 5307', three outside pressure recorders, 3/4" subsurface beans, perforations 5307-5325, 5416-5447, 30' air cushion. Tool open 2 hours, 30 minutes, shut in 1 hour, 10 minutes. Strong blow remaining constant throughout test. Died to surface 25 minutes, rate nil. No fluid loss in annulus. Recovered 290' (2.1 barrels) very gas cut mud

FEET ABOVE TESTER	DESCRIPTION	SALINITY (%) ppm NaCl	ROTARY GAS UNITS (T/U)	WEIGHT POUNDS PER GALLON
290	Very Gas cut Mud	150	220/150	9.1
tool	Gas-Cut mud	150	85/35	9.1

No H_2S odor detected in gas or mud.

ISIP $\frac{1815}{1800}$, IFP $\frac{150}{135}$, FFP $\frac{150}{135}$, SIP $\frac{1815}{1800}$ nearly stabilized after 30 minutes, HP $\frac{2790}{2745}$

Mud before test 9.8 pounds per gallon, 150 ppm, 46/11 (C/T)
Rotary Gas Units

Treated mud with starch.

Checked BOE daily.

Mud Summary

Weight 9.3-9.8 #/ gal. Salinity 100 - 150 ppm
Vis. 45-59 Sec. PH 6.5 - 7
W. L. 5.8 - 12.2 C. C. F. C. 2/32"

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET

DRILL PIPE SIZES

Contractor: George Noland Drilling Co.

Drillers: E. B. Lewis
H. E. Clements
T. T. Glazebrook

L. Snyder

North Boundary Butte
(FIELD)

San Juan, Utah
(COUNTY)

DRILLING REPORT

[illegible] 1956

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/16	4784		DRILLED 0'. [illegible] hours circulated for Schlumberger, [illegible] hours ran Schlumberger electrical survey, microlog, and [illegible]. [illegible] tested and waited on owners. 1 hour made up tester. [illegible] DST # 4 (open period 1 hour 24 minutes). Treated mud with [illegible] gypsum and preservative.
2/17	4784	4829	DRILLED 45'. 1 hour finished running DST # 4 (shut-in 1 hour). [illegible] hour attempted to backscuttle oil in drill [illegible], unsuccessful; 6 hours pulled [illegible] stands to fluid and waited [illegible] tool. 1 hour broke down and loaded out tool. [illegible] hour [illegible] volume. [illegible] hour reamed to bottom. Treated mud with [illegible] gypsum and preservative.

DST # 4, 4731'-4749'. Straddle test, Johnston Testers, [illegible] packers at 4724' and 4731', and 1-6½" conventional open hole packer at 4749'. Four pressure recorders, two outside and two below [illegible] packer, 3/4" subsurface and 1" surface beans, perforations 4731-4749, no air or water cushion. Tool open 1 hour, 24 minutes, [illegible] hour. Very strong blow immediately. Inflammable gas to surface [illegible] minutes, initially sweet, then becoming highly sulfurous, rate 450 MCF/D. Greenish brown oil to surface in 10 minutes. Produced into test tanks a total of 52.5 barrels oil in [illegible] minutes (including 15 minutes after tool was shut in), rate 1152-720 barrels per day, average 913 barrels per day. Tank and flow-line samples [illegible] 5.5% BS & W. Unable to reverse-circulate fluid out of drill [illegible], pulled drill pipe, leaving fluid in hole. Fluid below reverse circulation valve consisted of 270' (1.3 barrels) viscous oil-iron sulfide emulsion with strong H_2S odor, cutting [illegible]% (mostly iron sulfide). Bottom 3' above tool consisted of black sulfur water, maximum salinity 3300 ppm (t).

Tank Sample Number	Description	Cut%	API Gravity [illegible]
1	green brown oil with strong H_2S odor	2 [illegible]	38°
2	green brown oil with strong H_2S odor	1.5 [illegible]	38°
3	green brown oil with strong [illegible] odor	3.5 [illegible]	38°
4	green brown oil with strong H_2S odor	1 BS	[illegible]

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12¼"	0	1023		
7 7/8"	1023	4780	8 5/8"	1012'

DRILL PIPE SIZES: 4½", 16.6 #/ft.

D. K. [illegible]

North Boundary Butte (FIELD)

San Juan, Utah (COUNTY)

DRILLING REPORT

FOR PERIOD ENDING February 20, 1955

Section 33 (SECTION OR BLOCK)

42 S. / 24 E., SLBM (TOWNSHIP OR SURVEY)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/16	4784		DRILLED 0'. 3 hours circulated for Schlumberger, 7½ hours ran Schlumberger electrical survey, microlog, and laterolog. 3 hours circulated and waited on orders. 1 hour made up tester. 1½ hours ran DST # 4 (open period 1 hour 24 minutes). Treated mud with starch, gypsum and preservative.
2/17	4784	4829	DRILLED 45'. 1 hour finished running DST #4 (shut-in 1 hour), 1 hour attempted to backscuttle oil in drill stem into sump, unsuccessful; 6 hours pulled 3 stands to fluid and waited on daylight to pull tool. 1 hour broke down and loaded out tool. ½ hour built up mud volume, ½ hour reamed to bottom. Treated mud with salt gel, starch, gypsum and preservative.

DST # 4, 4731'-4749'. Straddle test, Johnston Testers. 2-6½" bobtail packers at 4724' and 4731', and 1-6½" conventional open hole packer at 4749'. Four pressure recorders, two outside and two below bottom packer, 3/4" subsurface and 1" surface beans, perforations 4731-4749', no air or water cushion. Tool open 1 hour 24 minutes, shut in 1 hour. Very strong blow immediately. Inflammable gas to surface in 2 minutes, initially sweet then becoming highly sulfurous, rate 450 MCF/D. Greenish brown oil to surface in 10 minutes. Produced into test tanks a total of 52.5 barrels oil in 95 minutes (including 15 minutes after tool was shut in), rate 1152-720 barrels per day, average 913 barrels per day. Tank and flow line samples cut 0.1 - 5.5% BS & W. Unable to reverse circulate fluid out of drill pipe; pulled drill pipe, leaving fluid in hole. Fluid below reverse circulation valve consisted of 270' (1.3 barrels) viscous oil-iron sulfide emulsion with strong H_2S odor, cutting 85% (mostly iron sulfide). Bottom 3' above tool consisted of black sulfur water, maximum salinity 3300 ppm (t).

Tank Sample Number	Description	Cut%	API Gravity Wet
1	green brown oil with strong H_2S odor	2 BS	38°
2	green brown oil with strong H_2S odor	3 BS	38°
3	green brown oil with strong H_2S odor	5.5 BS	38°
4	green brown oil with strong H_2S odor	1 BS	38°

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
18¼"	0	1023		
7 7/8"	1023	4710	9 5/8"	1012'
DRILL PIPE SIZES	4½", 16.6 #/ft.			

D. K. Murray

SIGNED

North Boundary Butte
(FIELD)
San Juan Utah
(COUNTY)

DRILLING REPORT
FOR PERIOD ENDING February 20, 1955

DAY	DEPTH FROM	DEPTH TO	REMARKS
2/17	4784	4829	FLOW LINE SAMPLE NO. DESCRIPTION CUT API GRAVITY 1 NOT TAKEN 2 green brown oil, temp. [illegible] F. trace sand 38° 3 green brown oil, temp. 42° F. 0.5 BS 4 green brown oil, temp. 42° F. 0.1 BS&W TEST ABOVE TESTER DESCRIPTION FT. GAS SALINITY 180 black, sulfurous, viscous oil emulsion, strong H2S odor, no cut obtainable. 90 black, sulfurous, viscous oil emulsion, strong H2S odor 85% BS. tool black sulfur water 28,000 ppm Mud before test, 150 ppm (Cl), 9.1 pounds per gallon. IFP 790, FFP 1110, SIP 1545 (stabilized immediately), HP 2140, BHT [illegible] F. NOTE: Pressure recorders indicated a slight leak [illegible] packer.
2/18	4829	4910	DRILLED 81'. 1½ hours circulated prior to running DST # 5. [illegible] thawed out frozen air lines. Treated mud with salt gel, [illegible] starch, and preservatives.
2/19	4910	4931	DRILLED 21'. 1 hour waited on tester, 2 hours made up test tool, 5 hours ran DST # 5, 1 hour broke down tool, ½ hour waited on [illegible] 1 hour thawed out mud lines and Kelly. Treated mud with salt gel and starch. DST #5, 4802-4910', Johnston Testers. Two 6½" bobbin [illegible] at 4780' and 4787'. 3 outside pressure recorders, 3/4" [illegible] and 1" surface beans, perforations 4788-4805' and 4[illegible]. [illegible] or water cushion. Tool open 4 hours 33 minutes, shut in [illegible]. Flow moderate and steady throughout test. Inflammable [illegible] surface in 21 minutes, rate nil. 8' (0.76 barrels) fluid [illegible] annulus. Recovered 230' (1.3 barrels) slightly gassy mud.

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12¼"	0	1023		
7 7/8"	1023	4710		
			9 5/8	1012

DRILL PIPE SIZES 4½", 16.6 pounds per foot

D. E. Murray

North Boundary Butte
(FIELD)
San Juan, Utah
(COUNTY)

DRILLING REPORT
FOR PERIOD ENDING
February 20, 1955

Section 23
(SECTION OR LEASE)
42 S / 22 E, SLM
(TOWNSHIP OR RANGE)

DAY	DEPTHS FROM	DEPTHS TO	REMARKS
2/19	4910	4931	

FEET ABOVE TESTER	DESCRIPTION	BAROID UNITS OF GAS (TOTAL METHANE)	SALINITY NaCl (t), ppm	WEIGHT POUNDS PER GALLON
180	Slightly gassy mud	50/40	200	9.2
90	Slightly gassy mud	90/36	180	9.3
Tool	Slightly gassy mud	200/96	150	8.7

IFP 180, FFP 180, SIP 1520 (stabilized after 45 minutes), HP 2420. BHT 125° F.

Mud before test 150 ppm (t), 9.3 pounds per gallon. No H_2S detected.

2/20 | 4931 | 4994

DRILLED 63'. Round trip and survey. 4½ hours Worked on light plant, 1½ hours. Treated mud with preservative and gypsum.

Mud Summary

Weight	9.7 pounds per gallon.
Viscosity	47-58 seconds
Water Loss	8-15.2 cc
Filter Cake	2/32 in.
Salinity	150-125 ppm
PH	7

Tested B. O. E. Daily

Drillers for George Noland Drilling Company
E. B. Lewis
H. E. Clements
T. T. Glazebrook

CONDITION AT BEGINNING OF PERIOD

HOLE SIZE	HOLE FROM	HOLE TO	CASING SIZE	DEPTH SET
12¼"	0	1023		
7 7/8"	1023	4710	9 5/8"	1012

DRILL PIPE SIZES 4½" 16.6 Pounds

Leonard Snyder
SIGNED

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Shell Oil Company Address 33 Richards Street

Lessor or Tract North Boundary Butte Field - State Utah

Well No. 1 Sec. 33 T. 42S. R. 22E. Meridian S.L.M. County San Juan

Location 3300 ft. [N.] of S Line and 1980 ft. [E.] of E. Line of Sec. 33 Elevation 5027.9' [illegible]
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed J. J. Pickett

Date APR 22 1955 Title Exploitation Engineer

The summary on this page is for the condition of the well at above date.

Commenced drilling January 9, 1955 Finished drilling March 6, 1955

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 4688 to 4750 No. 4, from ____ to ____

No. 2, from 5108 to 5282 No. 5, from ____ to ____

No. 3, from 5374 to 5430 G No. 6, from ____ to ____

IMPORTANT WATER SANDS NOTED

No. 1, from 114' to 299' No. 3, from ____ to ____

No. 2, from ____ to ____ No. 4, from ____ to ____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
9-5/8"	36#	8rd	Spang	1012'	Baker	-	-	-	Surface
5-1/2"	17#	8rd	J-55 Spang	5475'	Baker	-	4688	5282	Production

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9-5/8"	1012'	550 sacks	displacement	-	-
5-1/2"	5475'	250 sacks	displacement	-	127 bbls.

PLUGS AND ADAPTERS

Heaving plug—Material cement Length - Depth set 5430'

Adapters—Material ____ Size ____

SHOOTING RECORD

FOLD | MARK

5-1/2"	5475	250 sacks	displacement	-	127 bbls.

PLUGS AND ADAPTERS

[illegible] plug—Material cement Length - Depth set [illegible]

Adapters—Material .... Size ....

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
		SEE ATTACHED				

TOOLS USED

Rotary tools were used from ... to 5975 T.D. feet, and from - feet to - feet

Cable tools were used from - feet to - feet, and from - feet to - feet

DATES

.... 19 Put to producing .... 19.....

*The production for the first 24 hours was ...... barrels of fluid of which ......% was oil ......% emulsion; ......% water; and ......% sediment. Gravity, °Bé. ....

Gas zone (5374-5430)

If gas well, cu. ft. per 24 hours 400,000* Gallons gasoline per 1,000 cu. ft. of gas ......

Rock pressure, lbs. per sq. in. ....

EMPLOYEES

T. T. Glazebrook, Driller — E. B. Lewis, Driller

F. F. Clements, Driller — J. M. Conder, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0'	140'	140'	Navajo
140	185	45	Kayenta
185	845	660	Wingate
845	1430	585	Chinle
1430	1528	98	Shinarump
1528	1690	162	Moenkopi
1690	3780	2090	Cutler Group
3780	5545	1765	Hermosa
4600	-	-	Top of Paradox Member
5545	5670	125	Molas
5670	5830	160	Leadville
5830	5975 T.D.		Top of Dolomite (Ouray ?)

110 BOPD / APP. [illegible]
4-9-55 Drilling [illegible]
See Prelim Rep 3-20
BWS

[OVER]

*Production has not yet been established for the zones 4608-4750' and 5103-5283'. We will send these rates as soon as production is established.

Form 9-331 b
(April 1952)

Budget Bureau No. 42-R359.4.
Approval expires 12-31-60.

(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Indian Agency Navajo

Allottee Tribal Lands

Lease No. 14-20-603-236

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL		SUBSEQUENT REPORT OF WATER SHUT-OFF	
NOTICE OF INTENTION TO CHANGE PLANS		SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING	
NOTICE OF INTENTION TO TEST WATER SHUT-OFF		SUBSEQUENT REPORT OF ALTERING CASING	
NOTICE OF INTENTION TO REDRILL OR REPAIR WELL		SUBSEQUENT REPORT OF REDRILLING OR REPAIR	
NOTICE OF INTENTION TO SHOOT OR ACIDIZE		SUBSEQUENT REPORT OF ABANDONMENT	
NOTICE OF INTENTION TO PULL OR ALTER CASING		SUPPLEMENTARY WELL HISTORY	
NOTICE OF INTENTION TO ABANDON WELL		Placed Bridge Plug	X

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

November 21, 1958

North Boundary Butte

Well No. 1 is located 3300 ft. from {N/S} line and 1980 ft. from {E/W} line of sec. 33

NE 33 (¼ Sec. and Sec. No.) | 42S (Twp.) | 22E (Range) | SLBM (Meridian)

Aneth (Field) | San Juan (County or Subdivision) | Utah (State or Territory)

The elevation of the Kelly Bushing floor above sea level is 5028 ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

Well Status: TD 5975, PBTD 5450, Bridge Plug 5320
Casing: 5½" at 5475
Perforations: 5374-5480, 5108-5282 & 4638-4750

9-22-58 Rigged up completion rig. Killed well. Set cast iron bridge plug at 4780'. Ran tubin to 4777' and rods and pump.

9-23-58 to 10-3-58 Pumped and tested well.

10-4-58 RECOMPLETED INITIAL PRODUCTION (Representative) 344 B/D, gross, 275 B/D clean, cut 20% no gas measurement recompleted 10-4-58.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company Shell Oil Company

Address 705 Municipal Drive

mington, New Mexico

Original signed by
B. W. SHEPARD

By B. W. Shepard

Title Exploitation Engineer

U. S. GOVERNMENT PRINTING OFFICE 16—8437b-8

SHELL OIL COMPANY

Post Office Box 1200
Farmington, New Mexico

June 23, 1961

The State of Utah
Oil and Gas Conservation Commission
310 Newhouse Building
10 Exchange Place
Salt Lake City 11, Utah

Attention A. W. Glines

Gentlemen:

Regarding your letter dated June 20, 1961, we are forwarding two copies each of the following information on North Boundary Butte No. 1:

Drilling History
Log of Oil or Gas Well (U.S.G.S. Form)
Electrical Log
Laterolog
Microlog
Gamma Ray-Neutron Log

Very truly yours,

R. R. Robison
Division Production Manager

RJC:MPD

Enclosures

25

Consolidated Oil & Gas, Inc.

LINCOLN TOWER BUILDING
1860 LINCOLN STREET
DENVER, COLORADO 80203
(303) 255-1751

December 18, 1969

U. S. Geological Survey
Department of the Interior
P. O. Box 959
Farmington, New Mexico

Attention: Mr. P. T. McGrath

Gentlemen:

Re: Navajo #1 (North Boundary Butte)
Sec. 3-T42S-R22E, San Juan Co., Utah

Please find enclosed three copies of Form 9-331, "Subsequent Report of: Testing Lower Perforations". As shown, this work was not performed due to encountering a fish in the hole.

Very truly yours,

CONSOLIDATED OIL & GAS, INC.

D. E. Smink
Petroleum Engineer

DES/cc

Enclosure

cc. Navajo Tribe
Minerals Department

State of Utah
Oil & Gas Conservation Commission

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Consolidated Oil & Gas, Inc. (Shell)

3. ADDRESS OF OPERATOR
1860 Lincoln Street, Suite 1300, Denver, Colorado 80203

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
3300' North and 1980' West of Southeast Corner of Section 33, T-42S, R-22E

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-236

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo

7. UNIT AGREEMENT NAME
- - -

8. FARM OR LEASE NAME
North Boundary Butte

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
North Boundary Butte

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 33, T-42S, R-22E

14. PERMIT NO. P. T. McGrath's letter of 12/27/54

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5027.9' K.B.

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) Testing Lower Perforations			[X]
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Re: To drill out cast iron bridge plug at 4780' and test lower perforations 5108' - 5184', 5208' - 5266' and 5274' - 5282'.

The above-captioned work was not performed due to encountering a fish in the hole. The well currently produces from perforations 4688' - 4694', 4708' - 4714' and 4720' - 4750'. (See attached summary of daily operations)

18. I hereby certify that the foregoing is true and correct

SIGNED D. E. Smink TITLE Petroleum Engineer DATE 12/18/69

D. E. Smink

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

AKAH #1: (North Boundary Butte) 3300' N and 1980' W of SE Corner, Section 33, T42S-R22E, San Juan County, Utah

11/26/69: Pulling unit will move in and rig up. Will start operations Friday, November 28, 1969.

11/27/69: No report.

11/28/69: Will start workover today.

11/29/69: Pulled rods and pump and 2-7/8" tubing. Cleaned out cellar. Installed BOP's. SD at 3:30 PM. Running bit and scraper this AM.

11/30/69: Ran 4-3/4" bit and scraper. Tagged at 4724'. Top of BP at 4780'. Pumped 400 BW - could not break circulation. Put 6000# wgt. on bit and reverse circulated - could not make hole. Pulled bit and scraper, measured out of hole w/no correction. Shut down overnight.

12/1/69: No report.

12/2/69: Ran 4-3/4" bit (w/no scraper) on 2-7/8" tubing. Tagged PBTD at 4724'. Pumped 100 bbls. salt water down tubing, could not establish circulation. Rotated bit for 10 min. w/6,000 - 8,000 lb. wgt. Made no hole. Tubing had no torque. Pulled bit and tubing. Ran 4-3/4" o.d. impression block with 6 jts. tubing on sand line. Impression block stopped at 3500'. Pulled impression block. Scale build-up at 3500' indicated. Will run 4-1/2" o.d. impression block.

12/3/69: Ran 4-1/2" OD impression block on sand line. Got impression of 2-7/8" tubing body flared out to 3 inches. (Old Shell reports in Farmington files indicates a fish in the hole. Fish consists of - Top: Stub of 2-7/8" tubing, resulting from cut; pump seating nipple; and one joint of 2-7/8" tubing as a mud anchor. Old reports also indicate that fish is stuck, and that jarring to 150,000# failed to move fish.). Will run tubing, pump, and rods; and return well to production.

12/4/69: Ran tubing, pump, and rods and returned well to production. Final Report. Transferred to Production Department.

22

Consolidated Oil & Gas, Inc.

LINCOLN TOWER BUILDING
1860 LINCOLN STREET
DENVER, COLORADO 80203
(303) 255-1751

July 15, 1970

United States Geological Survey
Department of the Interior
P. O. Box 1809
Durango, Colorado 81302

Attention: Mr. Jerry W. Long

Re: Form 9-331
North Boundary Butte No. 1
San Juan County, Utah

Gentlemen:

Please find attached the original and two copies of Form 9-331 signifying our intention to drill out a cast iron bridge plug at 4780', and test perforations 5108-84, 5208-66', and 5274-82'.

A "Subsequent Report" of operations will be furnished you upon completion of operations.

Very truly yours,

CONSOLIDATED OIL & GAS, INC.

D. E. Smink

D. E. Smink
Petroleum Engineer

DES/cc

Attachment

cc. ✓State of Utah
Oil & Gas Conservation Commission

The Navajo Tribe
Minerals Department

20

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Consolidated Oil & Gas, Inc.

3. ADDRESS OF OPERATOR
1860 Lincoln Street, Suite 1300, Denver, Colo. 80203

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
3300' North and 1980' West of Southeast Corner of Section 33, T42S, R-22E

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-236

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo

7. UNIT AGREEMENT NAME
---

8. FARM OR LEASE NAME
North Boundary Butte

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 33, T42S-R22E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. PERMIT NO.
P. T. McGrath's letter of 12/27/54

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5027.9' KB

16. **Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data**

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other)			
(Other) Testing Lower Perforations	[X]			(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

Proposed work: Retrieve fish, drill out cast iron bridge plug at 4780', and test existing Akah perforations 5108-5282' for flowing oil and gas production.

APPROVED BY DIVISION OF
OIL & GAS CONSERVATION
DATE 7-20-70
BY Chas B Feight

18. I hereby certify that the foregoing is true and correct

SIGNED D. E. Smith TITLE Petroleum Engineer DATE 7/15/70

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Consolidated Oil & Gas, Inc.

3. ADDRESS OF OPERATOR
1860 Lincoln Street, Denver, Colorado 80203

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
3300' North and 1980' West of Southeast Corner of Section 33, T42S, R22E

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-236

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo

7. UNIT AGREEMENT NAME
---

8. FARM OR LEASE NAME
North Boundary Butte

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
North Boundary Butte

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Section 33-T42S-R22E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. PERMIT NO.
P. T. McGrath letter of 12/27/54

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5027.9' KB

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[ ]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]				
(Other)	pump test well		[xx]	(Other)			

(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

unit
Moved in pulling 8/27/70, and ran rods and tubing.

Will pump test well.

18. I hereby certify that the foregoing is true and correct

SIGNED D. E. Smink
D. E. Smink
TITLE Petroleum Engineer
DATE 9/3/70

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____
CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

5. LEASE DESIGNATION AND SERIAL NO.: 14-20-603-236

6. IF INDIAN, ALLOTTEE OR TRIBE NAME: Navajo

1. OIL WELL ☐ GAS WELL ☐ OTHER T-A

7. UNIT AGREEMENT NAME: ---

2. NAME OF OPERATOR: Consolidated Oil & Gas, Inc.

8. FARM OR LEASE NAME: North Boundary Butte

3. ADDRESS OF OPERATOR: 1860 Lincoln Street, Denver, Colorado 80203

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: 3300' North and 1980' West of Southeast Corner of Section 33, T42S, R-22E

10. FIELD AND POOL, OR WILDCAT: North Boundary Butte

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 33-T42S-R22E

14. PERMIT NO.: P. T. McGrath's letter of 12/27/54

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 5027.9' KB

12. COUNTY OR PARISH: San Juan

13. STATE: Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) testing of lower perfs.			X
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Summary of work performed:

Retrieved fish, Cement squeezed perfs. 4688-4750'. Drilled out CIBP at 4780'. Treated perfs. 5108-84, 5208-66, and 5274-84' w/500 gals. 15% reg. acid. Swabbed well down, recovered 95 - 98% water cut. Well Temporarily Abandoned.

18. I hereby certify that the foregoing is true and correct

SIGNED D. E. Smink TITLE Petroleum Engineer DATE 8/14/70

D. E. Smink

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Consolidated Oil & Gas, Inc.

LINCOLN TOWER BUILDING
1860 LINCOLN STREET
DENVER, COLORADO 80203
(303) 255-1751

August 14, 1970

U. S. Geological Survey
Department of the Interior
P. O. Box 959
Farmington, New Mexico

Attention: Mr. P. T. McGrath

Re: Navajo #1 (N. Boundary Butte)
Section 3-T42S-R22E
San Juan County, Utah

Gentlemen:

Please find enclosed three copies of Form 9-331, "Subsequent Report of: Testing of Lower Perforations", and a daily report of operations. As shown, this workover was unsuccessful and the well has been temporarily abandoned.

Very truly yours,

CONSOLIDATED OIL & GAS, INC.

D. E. Smink
Petroleum Engineer

DES/cc

Enclosures

cc. The Navajo Tribe
Minerals Department

State of Utah
Oil & Gas Conservation Comm.

PI

September 3, 1970

U. S. Geological Survey
Department of the Interior
P. O. Box 959
Farmington, New Mexico

Attention: Mr. P. T. McGrath

Re: Navajo #1 (N. Boundary Butte)
Section 3-T42S-R22E
San Juan County, Utah

Gentlemen:

Pursuant to our letter of August 14, 1970, in which you were informed of the temporarily abandoned status of the above well, please find enclosed three copies of Form 9-331, "Notice of Intention to Pump Test Well".

You will, of course, be notified of the final dispostion of this well.

Very truly yours,

CONSOLIDATED OIL & GAS, INC.

D. E. Smink
Petroleum Engineer

DES/cc

Enclosure

cc. The Navajo Tribe
Minerals Department

State of Utah
Oil & Gas Conservation Commission

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE*
(Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

1. OIL WELL [X] GAS WELL [ ] OTHER

2. NAME OF OPERATOR
Consolidated Oil & Gas, Inc.

3. ADDRESS OF OPERATOR
1860 Lincoln Street, Denver, Colorado 80203

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.)
At surface
3300' north and 1980' west of southeast corner of Sec. 33, T42S, R22E

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-236

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo

7. UNIT AGREEMENT NAME

8. FARM OR LEASE NAME
North Boundary Butte

9. WELL NO.
1

10. FIELD AND POOL, OR WILDCAT
North Boundary Butte

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec 33, T42S-R22E

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

14. PERMIT NO.
P. T. McGraths letter of 12/27/54

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5027.9' K.B.

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	[ ]	PULL OR ALTER CASING	[ ]	WATER SHUT-OFF	[ ]	REPAIRING WELL	[ ]
FRACTURE TREAT	[ ]	MULTIPLE COMPLETE	[ ]	FRACTURE TREATMENT	[ ]	ALTERING CASING	[ ]
SHOOT OR ACIDIZE	[ ]	ABANDON*	[ ]	SHOOTING OR ACIDIZING	[X]	ABANDONMENT*	[ ]
REPAIR WELL	[ ]	CHANGE PLANS	[ ]	(Other) return to production			
(Other)			[ ]	(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

Put well on pump and tested well for 20 days. Re-treated perforations 5108-84, 5208-66, and 5274-84 with 5,000 gals. 15% regular acid. Returned well to production.

18. I hereby certify that the foregoing is true and correct

SIGNED D. E. Smink TITLE Petroleum Engineer DATE 10/1/70

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Consolidated Oil & Gas, Inc.

LINCOLN TOWER BUILDING
1860 LINCOLN STREET
DENVER, COLORADO 80203
(303) 255-1751

WORKOVER REPORT

AKAH #1: 3300' N and 1980' W of Corner Sec. 33-T42S-R22E, San Juan Co., Utah, Elev. 5028' KB

7/23/70: Rigged up to pull tubing, pulled 26 jts. (tubing was parted in threads of 26th jt.). Waited on equipment 5 hrs., unloaded 168 jts. 2-1/2" tubing, ran overshot on 26th jt. tubing. Caught fish, pulled and laid down 18 jts. Shut down for night. 105 jts. production tubing to lay down. Will run impression block.

7/24/70: Pulled and laid down 105 jts. 2-7/8" tubing and pump barrel. Ran impression block on sand line -- indicated 3" flare or bevel on top. Ran 4-3/4" mill on 152 jts. 2-7/8" tubing. Milled on fish 1 hr., made 2" in 30 min. Fish appeared to be spinning. Pulled out of hole. Ran impression block -- top of fish appeared to be 2-7/8". This AM, will run overshot and fishing tools.

7/24/70: Pulled and laid down 105 jts. 2-7/8" tubing and pump barrel. Ran impression block on sand line...indicated 3" flare or bevel on top. Ran 4-3/4" mill on 152 jts. 2-7/8" tubing. Milled on fish 1 hr., made 2" in 30 min. Fish appeared to be spinning. Pulled out of hole. Ran impression block -- top of fish appeared to be 2-7/8". This AM, will run overshot and fishing tools.

7/25/70: Ran overshot, bumper sub, jars and 6- 4" DC's on 146 jts. 2-7/8" tubing. Latched onto fish. Jarred at 80,000# for 1 hr. Pulled free. Pulled out of hole. Recovered 9.80' stub of 2-7/8" tubing, 2-7/8" collar, pump seating nipple, 2-7/8" collar and 6" of 2-7/8" perf'd. nipple w/7.95' x 1-1/2" stinger. Ran 4" O.D. impression block, showed 2-7/8" tubing.

7/26/70: Ran overshot and latched onto fish. Jarred 4 times at 80,000#. Came free. Pulled out of hole. Recovered 3' piece perf'd. nipple. Ran impression block and got impression of nipple. Ran collar overshot, engaged coupling. Jarred 15 min. at 80,000#. Pulled out of hole. Recovered 1 mud anchor jt. tubing 30' long w/o coupling and bull plug. Ran 4-5/8" O.D. impression block. Pulled and got perf. burr impression.

C4

AKAH #1: (Workover)

7/27/70: Ran 4-1/4" impression block. Got impression of perforation burrs. Ran sand line without impression block and flagged line. Ran impression block and tagged 2' deeper. Ran tubing open-ended, and tagged at 4753' KB. Pulled up to 4603' and SD. Preparing to squeeze.

7/28/70: Lowered tubing to 4752'. Spotted 1 sk frac sand from 4752-4759'. Pulled tubing. Ran 2 jts. tailpipe, Baker Model "R" packer, and 142 jts. tubing. Set packer at 4427', tailpipe at 4488'. Pumped into perf's. 4688-4750' at 3 BPM and 350 psi. Tested casing to 400 psi (maximum). Squeezed 4688-4750' with 16 bbls. (68 sxs Class A w/.8% Halad-9, 12.5# Gilsonite/sk) to 2000 psi. Got squeeze job and tubing full of cement. Could not reverse. Unseated packer and pulled 46 jts. tubing. Circulated 20 BW down tubing. Pulled 96 jts. tubing, Model "R" packer and 2 jts. tailpipe. SD to WOC. Top of plug at 3368'.

7/29/70: Started up at 8:00 AM. Ran 4-3/4" bit on 2-7/8" tubing and scraper. Top of cement at 2600'. Rigged up to drill cement. Found split nipple in valve. Drilled soft cement from 2600 to 2660', hard cement from 2660 to 2850'. Total of 250' in 4 hrs. Circulated hole clean at 2850'. Pulled tubing, bit and scraper. Nippled down. Dug out collar. Removed casing valves, nipples, and well head. Will cut ring groove in well head, and test valves and nipples. Present operation: nippling up. Will go back in and finish drilling out.

7/30/70: Installed well head and BOP. Ran 4-3/4" bit and scraper, 6 4" D.C.'s, and 85 jts. 2-7/8" tubing. Broke circulation at 11:45 AM. Drilled hard cement from 2850 to 3060' and cement stringer from 3060 to 3130'. No cement from 3130 to 3905'. Hit cement at 3905'. Circulated hole clean. Pulled 119 jts. tubing, D.C.'s, scraper and bit. SD for night.

7/31/70: Cleaned out, circulated tank, ran new 4-3/4" bit + 4-3/4" casing scraper + 6 4" D.C.'s on 119 jts. of tubing. Circulated hole clean at 3905'. Drilled soft cement from 3905-3995', hard cement from 3995-4125'. Circulated hole clean. Picked up and raised bit to 4005'. Hung tubing in slips. Shut down for night.

8/1/70: Repaired hydraulic system on rig 2 hrs. Started drilling cement at 10:30 AM. Drilled hard cement from 4125 - 4340' (215' in 7-1/2 hrs.). Circulated hole clean. Raised bit to 4220'. SD for night.

8/2/70: Started drilling at 8:30 AM. Drilled hard cement from 4340 - 4464'. Cleaned out circulating tank. Pressure checked BOP and well head to 1000 psi. Well head leaked off to 400 psi in 3 min. Drilled hard cement from 4464 - 4620'. Drilled 280' cement in 9 rotating hrs. Circulated hole clean. Raised bit to 4500'. SD for night.

15

AKAH #1: (Workover)

8/3/70: Drilled hard cement from 4620 - 4721'. Removed BOP's, tightened well head, and installed BOP. Tested well head and BOP, and squeezed perfs. to 1000 psi for 5 min., held pressure. Drilled hard cement from 4721 - 4752', bit broke through. Washed frac sand, cement, and scale from 4752 - 4757'. Cleaned out circulating tank, loaded hole with SW. Pumped into bottom perfs. at 1.3 BPM and 350 psi surf. pressure. Reverse circulated well clean. Drilled on iron at 4757' for 15 min. Pulled 4-3/4" bit, scraper and D.C. Ran 4-1/2" O.D. impression block on sand line. Got impression of 2-7/8" collar slightly egg shaped with 1/2" piece of metal beside collar. Metal appeared to be piece of 1" strainer nipple, horse-shoe shaped. SD for night. Will run wash pipe, mill and overshot -- will mill over fish.

8/4/70: Ran mill, shoe, bumper sub, hydraulic jars and (6) 4" O.D. drill collars on 2-7/8" tubing. Tagged fish at 4757'. Broke circulation. Milled over fish. Tool went down 2.3' in 10 min. Pump pressure increased. Return stopped while reverse circulating. Pulled dry string -- mill shoe had marks on interior shoulder, indicating fish had been inside. Ran 4-5/8" O.D. magnet on sand line. Recovered steel filings. Pulled magnet. Ran friction socket, bumper sub, hydraulic jars, and (6) 4" O.D. drill collars on 2-7/8" tubing. Tagged fish at 4757'. Broke circulation. Washed over fish and pushed top of fish to 4758'. Pump pressure increased. Got 2000# weight increase when picking up fish. Pulled wet string. Recovered 2-7/8" collar, 2-7/8" bull plug on bottom of collar, piece of slip for drill collar clamp 1" x 1" and chip off 2-7/8" tubing wall. SD for night. Will run W.L. magnet, and mill out B.P.

8/5/70: Ran 4-5/8" O.D. magnet on sand line, (2 runs). Recovered approx. 3 oz. misc. iron. Ran mill shoe, bumper sub, 6 x 4" D.C. on 2-7/8" tubing. Tagged fillup at 4759'. Attempted to wash down (reverse). Mill shoe plugging badly while washing. Pulled out of hole. Ran 4-3/4" bit on 2-7/8" tubing. Drilled scale and rubber from 4759-4782'. Pulled out of hole w/bit. Bit showed signs of running on iron. SD for night. Will run magnet and then rerun mill shoe.

6

AKAH #1: (Workover)

8/6/70: Ran 4-5/8" magnet on sand line, recovered 3 small pieces of iron. Ran mill shoe, bumper sub, hydraulic jars, and (6) 4" O.D. drill collars on 2-7/8" tubing. Broke circulation, drilled over CIBP slips in 1 hr. 5 min. Pushed BP to 5278', plug would not go deeper. Pulled out of hole, laid down drill collars and tools. Ran production string as follows:

6 jts. 2-7/8" tubing		183.24'
1 Baker Model "R" packer		6.90'
1 cup type seating nipple		1.05'
163 jts. 2-7/8" tubing		5058.63'
	Total	5249.82'

14' KB to GL, tailpipe at 5263.82' (KB), and bottom packer at 5080.58' (KB). Removed BOP, set packer w/20,000# wgt., and installed tree. SD for night.

8/7/70: Well on vacuum this AM. Tagged FL at 2000'. Ran tubing broach (3 runs) on sand line to clean cement from tubing walls. Swabbed well as follows:

TIME	BF	SD (Avg.)	FL (Avg.)	% WTR.	REMARKS
10:30 - 11:30 AM	24	4000'	3000'	100	3 runs
12:30 PM	15	5000'	4250'	99	3 runs, good gas, cement chips
1:30 PM	6	5000'	4600'	95	3 runs, gas increasing
2:30 PM	2	5000'	4800'	98	gas decreasing
3:30 PM	2	5000'	4800'	98	gas decreasing

Will acidize this AM.

8/8/70: 15 hr. SITP = 25 psi. Started swabbing at 9:00 AM. Tagged FL at 3974' down, 1100' fluid in hole.

1st pull rec. 20 gals. of oil on top. Pulled from 5000'. Rest of fluid SW and no gas. 2nd pull rec. SW w/tr. of brn. green oil on bottom of pull, some gas. 1200' fluid in hole. 3rd pull rec. gas cut clean salt water w/tr. of oil, brn. and green. 600' fluid in hole. Pulled from 5000'. Total swabbed 1st hour = 12 BSW. 4th pull rec. SW w/ tr. brn. green oil. 400' fluid in hole (SD - swabbing).

Treated perfs. w/500 gals. 15% reg. acid, packer set at 5074'. Perfs. 5108-5184, 5208-5266', and 5274-5282'. Loaded annulus w/6 BSW, loaded tubing w/37 BSW. Tubing was on vacuum. Swabbed tubing dry. Pumped 11.5 bbls. acid to spot w/20.5 BW. Pumped 5 bbls. acid in formation, 1 BPM at 500 psi. Let soak 5 min. Pumped 5.5 bbls. acid, 1 BPM at 500 psi. Let soak 5 min. Pumped 1.5 bbls. flush at 500 psi. Max. press. 500 psi, min. zero psi. ISIP 400 psi. 3 min. SIP zero psi. Job complete at 12:15 PM. Total wtr. to rec. = 50 bbls. Ran swab at 1:00 PM, tagged FL at 100' down. Swabbed as follows:

17

AKAH #1: (Workover)

8/8/70:
continued

1:00 to 2:00 PM: FL 3300' down. Rec. 0 BO + 37 BW (acid gas on 4th pull).

2:00 - 3:00 PM: FL 4000' down. 2 runs. Rec. 0 BO + 15 BW w/acid gas. Est. 2 BW over load rec.

3:00 - 4:00 PM: FL 4000' down. Pulling from 5000'. Tr. of oil + 11 BW rec. (gas-cut SW, 2% maybe).

4:00 - 5:00 PM: FL 5000' down. 2 runs. 11 BSW (gas-cut).

8/9/70: 15 hr. SITP = 25 psi. Tagged FL at 3200'. Swabbed well as follows (hourly data):

BF	FL	SD	% WTR.	REMARKS
22	4200	5000	98	gas-cut fluid
10	"	"	98	" "
12	"	"	98	" "
11.5	"	"	98	" "
10	"	"	99+	" "
10	"	"	95	" "
11.5	"	"	95	" "
7	4400	"	95	" "
84.0				

8/10/70: Rigged unit down. Well Temporarily Abandoned.

AKAH #1: (Workover)

9/5/70: 11 BO + 12 BW, 12 x 84" spm (24 hrs.).

9/6/70: Roads washed out. Pumper could not get to well.

9/7/70: Well down when arrived at location (3:00 PM). Put to pumping. 48-hr. production: 25 BO + 22 BW.

9/8/70: 16 BO + 19 BW in 24 hrs. (12 x 84" spm).

9/9/70: Will have late report. 14 BO + 15 BW in 24 hrs. (12 x 84" spm).

9/10/70: 16 BO + 15 BW in 24 hrs. (12 x 84" spm). Will acidize well when wash-outs are repaired.

9/11/70: 11 BO + 11 BW (12 x 84" spm) in 20 hrs. (short gauge).

9/12/70: 16 BO in 24 hrs. (no gauge on water).

9/13/70: Road washed out -- could not get to well.

9/14/70: Road washed out -- could not get to well.

9/15/70: Produced 38 BO in 48 hrs. No gauge on water.

9/16/70: No report.

9/17/70: 16 BO + 16 BW in 24 hrs. (12 x 84" spm). Preparing to acidize.

9/18/70: Rigged up pulling unit and pulled rods and pump. Waited on acid truck 2 hrs. Rigged up B-J, loaded casing w/3 BSW and pressured to 350 psi. Acidized perfs. 5108-5184', 5208-5266', 5274-5282', w/5000 gals. 15% HCl NE, inhib. to 120° F. Avg. inj. rate 4 BPM, avg. TP 400 psi, min. press. "zero", max. press. 750 psi, min. rate 2-1/2 BPM, max. rate 6 BPM. Flushed w/34 BSW, rate 3-1/2 BPM at 750 psi. ISI 500 psi, 1 min. SIP "zero", then strong vacuum. 154 BTF to recover. Tagged FL at 3000' from surface.

4:30 - 5:30	6 pulls	FL 4200'	SD 5000'	25 BSW
5:30 - 6:30	5 pulls	FL ?	SD 5000'	18 BAW and acid gas
6:30 - 7:30	5 pulls	FL ?	SD 5000'	12 BAW and trace oil

2

AKAH #1: (Workover)

9/19/70: 13 hr. SITP = 125 psi.

No. of Pulls	SD	BF	% Water	Remarks
5	5000	22	95	Acid gas
5	5000	16	95	Acid gas
5	5000	15	90	Good vol. of gas
5	5000	12	90	" " "
5	5000	9	90	" " "
		74 BF		

PWOP at 3:30 PM. Rigged down pulling unit. 16 hr. production test: 23 BO + 17 BW (12 x 84" spm), plus filling tubing and flowline (est. capacity 30 BF).

9/20/70: 41 BO + 14 BW (12 x 84" spm) in 24 hrs.

9/21/70: 32 BO + 15 BW in 24 hrs. Have recovered 167 BSW, 7 bbls. over load.

9/22/70: No report.

9/23/70: 42 BO + 10 BW in 28 hrs.

9/24/70: 33 BO + 9 BW in 22 hrs. -- short gauge (12 x 84" spm).

9/25/70: 24 BO + 6 BW in 20 hr. (short gauge)

9/26/70: 37 BO + 7 BW in 25 hr. (12 x 84")

9/27/70: 5 BO + 3 BW in 4 hrs., down 20 hrs. w/engine trouble. 12 x 84" spm.

9/28/70: 30 BO + 9 BW in 24 hrs. (12 x 84")

9/29/70: 30 BO + 9 BW in 24 hrs. (12 x 84")

9/30/70: 43 BO + 5 BW (30-hr. gauge) (12 x 84")

PI

October 1, 1970

U. S. Geological Survey
Department of the Interior
P. O. Box 959
Farmington, New Mexico

Attention: Mr. P. T. McGrath

Re: Navajo No. 1, North Boundary Butte
Sec. 33, T42S, R22E
San Juan County, Utah

Gentlemen:

Please find attached three copies of Form 9-331 reporting the testing and re-stimulation of the subject well. This form supplements the Form 9-331 dated 8/14/70 and previously submitted to you. Also attached is a detail report of operations summarizing work performed and well test data from 7/23/70 to 9/30/70.

In further response to your letter of September 24, 1970, the well is producing commercial quantities of oil and the well will be produced on a regular schedule each month. The 5 to 10 barrels of water produced per day will be disposed of (as prior to the workover) in the North Boundary Butte No. 43-28 well, located 1650 ft. south and 2313 ft. east of the northwest corner of Section 28, T42S, R22E.

Yours very truly,

CONSOLIDATED OIL & GAS, INC.

D. E. Smink
Petroleum Engineer

DES:lt
Attachments

cc: The Navajo Tribe
Minerals Department

State of Utah
Oil & Gas Conservation Commission

Consolidated Oil & Gas, Inc.

P. O. BOX 2038
FARMINGTON, NEW MEXICO 87499
(505) 632-8056

January 29, 1986

State of Utah
Division of Oil, Gas & Mining
3 Triad Center, Suite 350
Salt Lake City, Utah

RE: Name Change of Principal
from Consolidated Oil & Gas, Inc.
to Columbus Energy Corporation

Gentlemen:

Consolidated Oil & Gas, Inc. requests a name change of principal to Columbus Energy Corporation. This name change will include all Federal, Indian, State and Fee wells operated by Consolidated Oil & Gas, Inc. in Utah. The attached list contains well names, lease numbers and locations for all Federal and Indian leases operated in Utah.

Well signs have been changed to Columbus Energy Corp. and the required oil & gas bonds have been filed.

Please contact our Farmington office if you need any additional information.

Thank you,

Dale Richardson
Production & Drilling Sup't.

Attach.

CONSOLIDATED OIL & GAS, INC. - SAN JUAN COUNTY, UTAH WELLS

WELL NAME	LOCATION	COUNTY	LEASE NO.
AKAH 1	NE/4 33-42S-22E	SJ	14-20-603-236
BLUFF 3	NW/NW/4 4-40S-23E	SJ	SL 071403A
BLUFF 13-4	"	SJ	"
BLUFF 24-5	"	SJ	"
BLUFF 42-5	"	SJ	"
BLUFF 44-5	"	SJ	"
DESERT CREEK 2	SE/4 35-41S-23E	SJ	14-20-603-248
RECAPTURE CREEK 1	SE/SW/4 21-40S-23E	SJ	U 01890
RECAPTURE CREEK 2	SW/4 21-40S-23E	SJ	"
RECAPTURE CREEK 3	SE/4 21-40S-23E	SJ	"
TOHONADLA 1	SE/4 35-41S-21E	SJ	14-20-603-229
TOHONADLA 23-35	SW/4 35-41S-21E	SJ	"
TOHONADLA 32-35	NE/4 35-41S-21E	SJ	"
TOHONADLA 36-1	SW/4 36-41S-21E	SJ	"
TOHONADLA 41-25	NE/4 25-41S-21E	SJ	"
TOHONADLA 41-35	NE/4 35 41S-21E	SJ	"
TOHONADLA 43-35	SE/4 35-41S-21E	SJ	"
TOHONADLA TRACT 23-1	NE/4 02-42S-21E	SJ	14-20-603-270

UTAH
NATURAL RESOURCES
OIL, GAS AND MINING

3 Triad Center, Suite 350 Salt Lake City, UT 84180-1203

Ph. (801)538-5340

NOTICE OF TRANSFER OF OWNERSHIP

Present operator: CONSOLIDATED OIL & GAS, INC. Telephone: (505)632-8056

Address: P.O. BOX 2038

City: FARMINGTON State: N.M. Zip: 87499

Well no.: 1 Field or Unit name: AKAH

Sec.: 33 Twp.: 42S Rng.: 22E County: SAN JUAN Lease no. 14-20-603-236

Effective date of transfer: December 1, 1985

Signature of present operator

April 7, 1986

Date

New operator: COLUMBUS ENERGY CORPORATION

Address: P.O. BOX 2038

City: FARMINGTON State: N.M. Zip: 87499

Signature of new operator

April 7, 1986

Date

(This space for DOGM approval)

Approved by: Title: Date:

Form DOGM-UIC-5 (2/86)

UTAH NATURAL RESOURCES
Oil, Gas & Mining

355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Ut
84180-1203. ● (801-538-5340)

MONTHLY OIL AND GAS PRODUCTION REPORT

012108

Operator name and address:

● COLUMBUS ENERGY CORP
1860 LINCOLN ST #1100
DENVER CO 80295
ATTN: SHELLENE KRAFT

Utah Account No. N0255

Report Period (Month/Year) 11 / 86

Amended Report ☐

Well Name API Number Entity Location	Producing Zone	Days Oper	Production Volume Oil (BBL)	Gas (MSCF)	Water (BBL)
NAVAJO TR #23-1 4303715540 06230 42S 21E 2	ISMY	30	912	110	168
AKAH #1 4303715870 06240 42S 22E 33	PRDX	0	0	0	0
BLUFF #42-5 4303730866 06245 40S 23E 5	DSCR	0	0	0	0
BLUFF #3 4303715864 06250 40S 23E 4	DSCR	0	0	0	0
BLUFF #24-5 4303715865 06250 40S 23E 5	PRDX	0	0	0	0
BLUFF #44-5 4303715867 06250 40S 23E 5	PRDX	0	0	0	0
BLUFF #13-4 4303730726 06250 40S 23E 4	DSCR	0	0	0	0
RECAPTURE CRK #2 4303730727 06255 40S 23E 21	IS-DC	0	0	0	0
TOHONADLA 36-1 4303730854 06260 41S 21E 36	PRDX	0	0	0	0
RECAPTURE CRK #1 4303715871 06265 40S 23E 21	IS-DC	30	613	707	120
DESERT CRK #2 4303715868 06270 41S 23E 35	PRDX	30	549	0	0
DESERT CRK #26-36 4303715869 06270 41S 23E 36	PRDX	0	0	0	0
TOHONADLA #1 4303715872 06290 41S 21E 35	PRDX	30	766	100	773
	TOTAL		2840	917	1061

Comments (attach separate sheet if necessary) Akah #1 - SOLD TO BOG INC. effective 12-1-86 per attached ENTITY ACTION FORM

I have reviewed this report and certify the information to be accurate and complete. Date 1/6/87

Shellene Kraft-Khwajazada
Authorized signature

Telephone (303) 861-5252

PLEASE COMPLETE FORMS IN BLACK INK

UTAH
NATURAL RESOURCES
Oil, Gas & Mining
4241 State Office Building · Salt Lake City, UT 84114 · 801-533-5771

DOGM 56-64-23
an equal opportunity employer

PRODUCING ENTITY ACTION FORM

Operator Name: Columbus Energy Corp.
Address: 1860 Lincoln Street, Suite 1100
City: Denver State: CO Zip: 80233
Utah Account No.: N0255

Authorized Signature: Shellene Kraft-Khwajazada
Effective Date: 12/01/86 Telephone: (303) 861-5252

ACTION CODE

A Establish new entity for new well(s).
B Add new well(s) to existing entity.
C Delete well(s) from existing entity.
D Establish new entity for well(s) being deleted from existing entity.
E Change well(s) from one entity to another existing entity.
F Other. (Specify using attachments if necessary.)

BRACKET WELLS TO BE GROUPED TOGETHER

Action Code	Current Entity No.	New Entity No.	API No.	Well Name	Well Location Sec.	T	R	QQ	County	Producing Formation
C	06240	------	4303715870	Akah #1	33	42S	23E	SE NE	San Juan	DSCR
		SOLD TO:	Bog, Inc. 200 Grand Ave., Ste. 318 P.O. Box 636 Grand Junction, CO 81502							
			No Entity	No Change Is Necessary DTS 1-12-87						

RECEIVED
DEC 31 1986
DIVISION OF OIL GAS & MINING

STATE OF COLORADO

DEPARTMENT OF
STATE

CERTIFICATE

I, NATALIE MEYER, Secretary of State of the State of Colorado hereby certify that the prerequisites for the issuance of this certificate have been fulfilled in compliance with law and are found to conform to law.

Accordingly, the undersigned, by virtue of the authority vested in me by law, hereby issues A CERTIFICATE OF AMENDMENT TO BOWERS OIL AND GAS, INC., FORMERLY KNOWN AS BOG, INC.

Dated: SEPTEMBER 19, 1988

SECRETARY OF STATE

UTAH
NATURAL RESOURCES
Oil, Gas & Mining

355 West North Temple, 3 Triad Center, Suite 350, Salt Lake City, Ut
84180-1203. ● (801-538-5340)

DOGM 56-64-21
an equal opportunity employer

MONTHLY OIL AND GAS PRODUCTION REPORT

Operator name and address:

● BOG INC (BOWERS)
P O BOX 636
GRAND JUNCTION CO 81502
ATTN: DENISE D. JOHNSON

Utah Account No. N0150

Report Period (Month/Year) 1 / 89

Amended Report ☐

Well Name API Number Entity Location	Producing Zone	Days Oper	Production Volume Oil (BBL)	Gas (MSCF)	Water (BBL)
ADAMS # 22-2 FEDERAL 4301930664 00245 20S 21E 22	MRSN				
ADAMS #22-1 FEDERAL 4301930684 00245 20S 21E 22	MRSN				
BOWERS FED #1-6 4301930411 00420 20S 24E 6	BUKHN				
BO-TX #2-36 4301930747 00430 20S 21E 36	DKTA				
TUMBLEWEED #1 4301930513 02235 20S 21E 27	MNCS				
FEDERAL TUMBLEWEED #27-5 4301930715 02235 20S 21E 27	MNCS				
MBLEWEED 27-8 4301931165 02235 20S 21E 27	MNCS				
FEDERAL 22-3 4301930665 02236 20S 21E 22	MNCS				
TUMBLEWEED 27-3 4301930643 02260 20S 21E 27	MRSN				
AKAH #1 4303715870 06240 42S 22E 33	PRDX				
ADAMS #1 STATE 4301915106 06275 20S 21E 36	DKTA				
E CISCO FEDERAL 1-3 4301930557 08235 20S 23E 1	MRSN				
BN #4-33 4303730919 09170 42S 22E 33	AKAH				
	TOTAL				

Comments (attach separate sheet if necessary) _____

I have reviewed this report and certify the information to be accurate and complete. Date _____

Authorized signature _____ Telephone _____

PLEASE COMPLETE FORMS IN BLACK INK

Form 3160-5
(November 1983)
(Formerly 9-331)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

(Other instructions on reverse side)

Expires August 31, 1985

5. LEASE DESIGNATION AND SERIAL NO.
14-20-603-236

6. IF INDIAN, ALLOTTEE OR TRIBE NAME
Navajo

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

7. UNIT AGREEMENT NAME
N/A

1. OIL WELL [XX] GAS WELL [ ] OTHER

8. FARM OR LEASE NAME
Indian

2. NAME OF OPERATOR
Bower Oil and Gas, Inc.

9. WELL NO.
North Boundary Butte 1

3. ADDRESS OF OPERATOR
P.O. Box 636, Grand Junction, CO 81502

10. FIELD AND POOL, OR WILDCAT
Akah Field, Akah Pool

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements. See also space 17 below.)
At surface
SW¼NE¼

RECEIVED
AUG 28 1989
DIVISION OF OIL, GAS & MINING

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA
Sec. 33, T42S, R22E

14. PERMIT NO.
43-037-15870

15. ELEVATIONS (Show whether DF, RT, GR, etc.)
5027.9 KB

12. COUNTY OR PARISH
San Juan

13. STATE
Utah

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF		PULL OR ALTER CASING		WATER SHUT-OFF		REPAIRING WELL	
FRACTURE TREAT		MULTIPLE COMPLETE		FRACTURE TREATMENT		ALTERING CASING	
SHOOT OR ACIDIZE	X	ABANDON*		SHOOTING OR ACIDIZING		ABANDONMENT*	
REPAIR WELL		CHANGE PLANS		(Other)			
(Other)				(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) *

As this well has experienced a sudden decline in production, and the pump has indicated we have scale problems, we request permission to acidize the well using approximately 500 Gallons of 15% HCL. We would like to start the work as soon as possible.

OIL AND GAS	
DRN	RJF
JRB ✓	GLH
DTS	SLS
2-TAS	↘
3- MICROFILM	✓
4 FILE	

18. I hereby certify that the foregoing is true and correct

SIGNED James E. Bower TITLE President DATE 8/16/89

(This space for Federal or State office use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Federal approval of this action is required before commencing operations.

ACCEPTED BY THE STATE OF UTAH DIVISION OF OIL, GAS, AND MINING
DATE 9-5-89
BY: John R. Baza

*See Instructions on Reverse Side

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Form 9

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

6. Lease Designation and Serial Number

7. Indian Allottee or Tribe Name

8. Unit or Communitization Agreement

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, deepen existing wells, or to reenter plugged and abandoned wells.
Use APPLICATION FOR PERMIT— for such proposals

1. Type of Well
☐ Oil Well ☐ Gas Well ☐ Other (specify)

9. Well Name and Number
No Boundary Butte #1

2. Name of Operator
Bowers Oil and Gas, Inc.

10. API Well Number
43037 15870

3. Address of Operator
P.O. Box 636, Grand Junction, CO 81502

4. Telephone Number
970-245-1342

11. Field and Pool, or Wildcat

5. Location of Well
Footage :
QQ, Sec, T., R., M. : T42OS R 22OE Sec 33
County :
State : UTAH

12. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

NOTICE OF INTENT (Submit in Duplicate)		SUBSEQUENT REPORT (Submit Original Form Only)	
☐ Abandonment	☐ New Construction	☐ Abandonment *	☐ New Construction
☐ Casing Repair	☐ Pull or Alter Casing	☐ Casing Repair	☐ Pull or Alter Casing
☐ Change of Plans	☐ Recompletion	☐ Change of Plans	☐ Shoot or Acidize
☐ Conversion to Injection	☐ Shoot or Acidize	☐ Conversion to Injection	☐ Vent or Flare
☐ Fracture Treat	☐ Vent or Flare	☐ Fracture Treat	☐ Water Shut-Off
☐ Multiple Completion	☐ Water Shut-Off	☐ Other _____	
☒ Other Yearly shut-in report			
Approximate Date Work Will Start _____		Date of Work Completion _____	

Report results of Multiple Completions and Recompletions to different reservoirs on WELL COMPLETION OR RECOMPLETION AND LOG form.

* Must be accompanied by a cement verification report.

13. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)

We have no shut-in wells located in the State of Utah.

RECEIVED
JAN 27 1999
DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct

Name & Signature James E. Bowers James E. Bowers Title President Date 1/25/99

(State Use Only)

(8/90)

See Instructions on Reverse Side